Topock Project Executive Abstract

Document Title: Combined Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report, Interim Measures No. 3, PG&E Topock Compressor Station, Needles, California (PGE20190115A) Submitting Agency: DOI Final Document? ☒ Yes ☐ No	Date of Document: January 15, 2019 Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) – PG&E
Priority Status: ☐ **HIGH** ☐ **MED** ☒ **LOW** Is this time critical? ☐ Yes ☒ No Type of Document: ☐ Draft ☒ Report ☐ Letter ☐ Memo ☐ Other / Explain:	Action Required: ☒ Information Only ☐ Review & Comment Return to: _____ By Date:_____ ☐ Other / Explain:
What does this information pertain to? ☐ Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA) ☐ RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment) ☐ Corrective Measures Study (CMS)/Feasibility Study (FS) ☐ Corrective Measures Implementation (CMI)/Remedial Action ☐ California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR) ☒ Interim Measures ☐ Other / Explain:	Is this a Regulatory Requirement? ☒ Yes ☐ No If no, why is the document needed?
What is the consequence of NOT doing this item? What is the consequence of DOING this item? Submittal of this report is a compliance requirement under DOI ARARs.	Other Justification/s: ☐ Permit ☐ Other / Explain:

Brief Summary of attached document:

Interim Measures No. 3 (IM-3) Injection Well Field Performance Assessment Report (PAR): The objective of the PAR is to document IM-3 injection system operational performance and evaluate groundwater quality and hydraulic changes associated with the injection system. Based on data obtained through December 2018, hydraulic response of the aquifer to injection activity is consistent with expectations, and there are no indications of adverse effects to aquifer water quality due to injections. In addition, sufficient injection capacity has been maintained with no significant injection well performance issues. The IM-3 injection well field continues to be an effective strategy for managing treated groundwater from IM-3.

Compliance Monitoring Program (CMP), 2018 Annual Report: The purpose of the Topock CMP is twofold: 1) to monitor changes in groundwater hydraulics and/or water quality of the aquifer in the injection well area, and 2) to ensure that the quality of the aquifer is not adversely affected by the injected water. The monitoring network consists of multiple observation wells (OW series) and compliance wells (CW series) screened in the shallow, middle, and/or deep zones of the Alluvial Aquifer. The injection of treated groundwater in the area began in 2005. As of 2018, the majority of the compliance and observation wells demonstrate a treated/injected water signature.

This report presents groundwater analytical results and water level data collected during the 2018 annual period. During the 2018 annual period, no samples exceeded the water quality objectives for hexavalent chromium, chromium, pH, or total dissolved solids. The next CMP event is scheduled to occur in the fourth quarter of 2019.

Written by: PG&E

Recommendations:

This report is for your information only.

How is this information related to the Final Remedy or Regulatory Requirements:

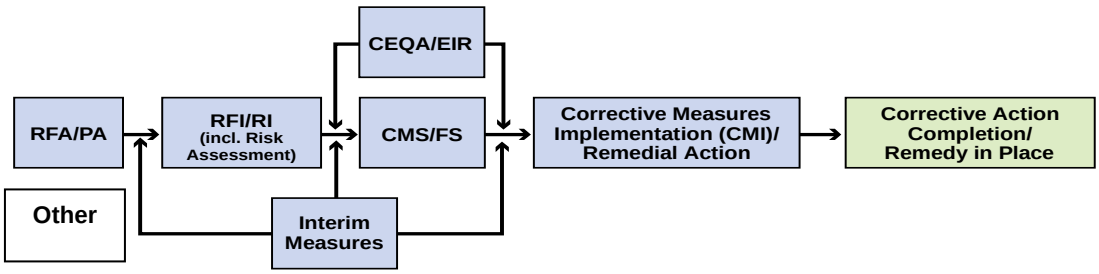
Submittal of this report is a compliance requirement under DOI ARARs beginning August 2011.

Other requirements of this information?

None.

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site (www.dtsc-topock.com).



Legend
RFA/PA – RCRA Facility Assessment/Preliminary Assessment
RFI/RI – RCRA Facility Investigation/CERCLA Remedial Investigation (including Risk Assessment)
CMS/FS – RCRA Corrective Measure Study/CERCLA Feasibility Study
CEQA/EIR – California Environmental Quality Act/Environmental Impact Report

Version 9

Pacific Gas and Electric Company

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January 15, 2019

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Subject: *Combined Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report, Interim Measures No. 3, PG&E Topock Compressor Station, Needles, California* (Document ID: PGE20190115A)

Dear Ms. Innis and Mr. Yue:

Enclosed is the Combined Compliance Monitoring Program (CMP) 2018 Annual Groundwater Monitoring Report and Performance Assessment Report (PAR) for Interim Measures No. 3 (IM-3) at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station site near Needles, California. This combined report presents results of the biennial (2017-2018) assessment of IM-3 injection well field performance, and documents the results of compliance monitoring activities conducted during the 2018 annual period (from January 1, 2018 through December 31, 2018).

The first PAR for the IM-3 injection well field was submitted on November 30, 2006 in accordance with the California Environmental Protection Agency, Department of Toxic Substances Control's (DTSC's) conditional authorization (Condition 18) to begin operating the IM-3 facilities, dated July 15, 2005. Based on data presented in this first biennial PAR, DTSC approved the continued operation of the IM-3 injection wells in a letter dated January 5, 2007. As part of this approval, DTSC required PG&E to continue to submit a PAR every 2 years to evaluate the injection well operations and the influence of treated water on aquifer quality. This combined report includes the seventh (2017-2018) biennial PAR and fulfills the DTSC requirement.

Additionally, the enclosed report presents CMP results for the 2018 annual period and has been prepared in accordance with the United States Department of the Interior's August 18, 2011 letter

stating that the Interim Measures No. 3 Waste Discharge Requirements are applicable or relevant and appropriate requirements.

The current contingency plan specifies the water quality objectives/action levels for hexavalent chromium (Cr[VI]), chromium, total dissolved solids (TDS), and pH, which are used to determine whether contingency plan actions are necessary based on sample results. These threshold concentrations, used to trigger the contingency plan, are as follows: Cr(VI) greater than 32 micrograms per liter (µg/L), chromium greater than 28 µg/L, TDS greater than 10,800 milligrams per liter, and pH outside of the range of 6.2 to 9.2. No samples exceeded the water quality objectives for Cr(VI), chromium, pH, or TDS during the 2018 annual period. The next annual CMP monitoring event is scheduled for the fourth quarter of 2019.

Please contact me at (760) 791-5884 if you have any questions regarding the PAR/CMP.

Sincerely,



Curt Russell
Topock Remediation Project Manager

Cc: Scot Stormo, Water Board
Christopher Guerre, DTSC

ARCADIS Design & Consultancy for natural and built assets

Pacific Gas and Electric Company

COMBINED COMPLIANCE MONITORING PROGRAM 2018 ANNUAL GROUNDWATER MONITORING REPORT AND PERFORMANCE ASSESSMENT REPORT

Interim Measures No. 3
PG&E Topock Compressor Station
Needles, California
Document ID: PGE20190115A

January 15, 2019



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COMBINED COMPLIANCE MONITORING PROGRAM 2018 ANNUAL GROUNDWATER MONITORING REPORT AND PERFORMANCE ASSESSMENT REPORT

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Document ID: PGE20190115A

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ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
ARAR	applicable or relevant and appropriate requirement
Arcadis	Arcadis U.S., Inc.
CMP	Compliance Monitoring Program
Cr(VI)	hexavalent chromium
CW	compliance well
DOI	United States Department of the Interior
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
IM-3	Interim Measures No. 3
mg/L	milligrams per liter
MRP	Monitoring and Reporting Program
MS	matrix spike
MSD	matrix spike duplicate
OW	observation well
PAR	Performance Assessment Report
PDS	post-digestion spike
PG&E	Pacific Gas and Electric Company
QAPP	Quality Assurance Project Plan
QC	quality control
RPD	relative percent difference
TDS	total dissolved solids
Water Board	California Regional Water Quality Control Board, Colorado River Basin Region
WDR	waste discharge requirement
WQO	water quality objective

1 INTRODUCTION

This Combined Compliance Monitoring Program (CMP) 2018 Annual Groundwater Monitoring Report and Performance Assessment Report (PAR) has been prepared on behalf of Pacific Gas and Electric Company (PG&E) for the Interim Measures No. 3 (IM-3) injection well field area at the Topock Compressor Station site (the Site) near Needles, California. PG&E is currently implementing IM-3 to mitigate elevated chromium and hexavalent chromium (Cr[VI]) concentrations in groundwater at the Site. The components of IM-3 include groundwater extraction in the Colorado River floodplain, ex-situ treatment of the extracted groundwater, and discharge of the treated groundwater via an onsite injection well field located in the East Mesa Injection Area. Figure 1 shows the locations of the groundwater extraction, conveyance, treatment, and injection facilities associated with the IM-3 system.

The objectives of this report are to:

- Present the results of the biennial assessment of injection well field performance
- Document the results of CMP activities conducted during the 2018 annual period (from January 1, 2018 through December 31, 2018).

1.1 Description of Groundwater Injection Well Field

Treated water from the IM-3 system is pumped through an aboveground pipeline to the injection well field, which is located nearly 1,500 feet west of the treatment plant on what is known as the East Mesa (CH2M HILL 2015a). The injection well field comprises two injection wells (IW-02 and IW-03), which are constructed of 6-inch-diameter stainless-steel louvered screen connected to mild steel risers (CH2M HILL 2015a). The two injection wells are 340 and 330 feet deep, respectively, with a 160-foot screened interval and design injection capacity of 200 gallons per minute.

Three observation well (OW) clusters (OW-01, OW-02, and OW-05) are located between 50 and 100 feet from the injection wells on the East Mesa. Each OW cluster includes wells screened in the shallow, mid-depth, and deep monitoring zones. Four additional monitoring well clusters, known as the compliance well (CW) clusters (CW-01, CW-02, CW-03, and CW-04) surround the East Mesa and are located between 300 and 550 feet from the injection wells. Each CW cluster includes wells screened in the mid-depth and deep monitoring zones. The locations of the injection wells, OW clusters, and CW clusters are shown on Figure 2.

1.2 PAR Background and Objectives

On July 15, 2005, the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) conditionally authorized PG&E to begin operating the IM-3 facilities (DTSC 2005). This authorization allowed the injection of treated water from the IM-3 system as a limited-duration pilot study lasting through January 31, 2007. DTSC further directed PG&E to assess the performance of the injection well field and submit a report by November 30, 2006 (DTSC 2005).

As directed, PG&E submitted the first biennial PAR for the IM-3 Injection Well Field, PG&E Topock Compressor Station, Needles, California (CH2M HILL 2006) on November 30, 2006. This report

documented performance of the IM-3 injection well field during the DTSC-mandated temporary operation period. Based on data presented in the first biennial PAR, DTSC approved the continued operation of the IM-3 injection wells in a letter dated January 5, 2007 (DTSC 2007). As part of this approval, DTSC required PG&E to continue to submit a PAR every 2 years to evaluate the injection well operations and the influence of treated water on aquifer quality (DTSC 2007).

On November 29, 2012, DTSC concurred with PG&E's proposal to combine the biennial PAR with the annual CMP report for the IM-3 injection well field (DTSC 2012). Accordingly, submittal of this document, which includes the seventh biennial PAR, meets the requirement of Condition 18 in DTSC's July 15, 2005 and January 5, 2007 letters to assess the performance of the injection well field as a means for management of treated water from the IM-3 system beyond the pilot study period. This report documents injection system operational performance and evaluates groundwater quality and hydraulic changes associated with the injection system based on data obtained through December 2018.

1.3 CMP Background and Objectives

In addition to fulfilling the biennial PAR requirement, this document satisfies IM-3 injection well field compliance reporting requirements under the CMP. The objectives, proposed sampling plan and data evaluation methods, and reporting requirements for monitoring of the IM-3 injection well field were documented in the Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area, Topock Compressor Station, Needles, California (Compliance Monitoring Plan; CH2M HILL 2005a), which was submitted to the California Regional Water Quality Control Board, Colorado River Basin Region (Water Board) and DTSC on June 17, 2005. An addendum to the Compliance Monitoring Plan was subsequently submitted on December 13, 2005 (Compliance Monitoring Plan Addendum; CH2M HILL 2005b). Several modifications to the CMP monitoring and reporting requirements have since been approved as summarized in Exhibit 1 below.

Exhibit 1. Historical Modifications to the CMP

Modification	Approval Date
Modification of reporting requirements	DTSC: June 9, 2006
Reduction of constituents analyzed during quarterly sampling of CMP observation wells	Water Board: January 23, 2007 DTSC: January 22, 2007
Change from laboratory pH to field-collected pH for reporting	Water Board: October 16, 2007 DTSC: January 22, 2008
Modification of Cr(VI) analytical methods to extend hold time to 28 days	Water Board: November 13, 2007 DTSC: January 22, 2008
Modification of sampling and reporting frequency and the field pH trigger range for the CMP contingency plan	Water Board: August 28, 2008 DTSC: December 12, 2008 (pH), September 3, 2009

Modification	Approval Date
United States Department of the Interior (DOI) adopts waste discharge requirements (WDRs) as applicable or relevant and appropriate requirements (ARARs)	DOI: August 18, 2011 Water Board: July 26, 2011
Modification of sampling and reporting frequency to eliminate the first half semiannual monitoring event and report (DOI 2015)	DOI: March 20, 2015 Water Board: March 16, 2015

Note: Information above taken from the Combined Compliance Monitoring Program, Semiannual Groundwater Monitoring Report, Second Half 2014, and Performance Assessment Report, Interim Measures No. 3, Injection Well Field, PG&E Topock Compressor Station, Needles, California (CH2M HILL 2015a).

Before September 2011, PG&E operated the IM-3 injection system under Water Board WDR Order No. R7-2004-0103 (adopted on October 13, 2004), Order No. R7-2006-0060 (issued on September 20, 2006), and the revised Monitoring and Reporting Program (MRP; issued on August 28, 2008 under Order No. R7-2006-0060). After Order No. R7-2006-0060 expired on September 20, 2011, discharge compliance oversight and enforcement were transferred from the Water Board to the DOI. As documented in the August 18, 2011 letter from the DOI to the Water Board, the DOI confirmed the following (DOI 2011):

- WDRs are ARARs under the Comprehensive Environmental Response Compensation and Liability Act response action ongoing at the Site.
- DOI will enforce the WDRs pursuant to the Administrative Consent Agreement entered into by DOI and PG&E in 2005 (DOI 2005) in lieu of the Water Board's adoption of a new Order to replace the expiring Order (Order No. R7-2006-0060) that originally established the WDRs.
- DOI concurred with the division of roles and responsibilities between DOI and the Water Board for monitoring and enforcing compliance with the WDRs.

Currently, PG&E operates the IM-3 injection system under the DOI waste discharge ARARs, which specify effluent limitations, prohibitions, specifications, and provisions for subsurface injection. The MRP set forth in the ARARs specifies the requirements for monitoring the area around the IM-3 injection well field (East Mesa Injection Area) to ensure that the injection of treated groundwater does not adversely impact aquifer water quality.

The IM-3 injection system comprises IW-02 and IW-03 (Figure 2). As discussed in Section 1.2, operation of the treatment system was conditionally approved on July 15, 2005 (DTSC 2005), and injection into IW-02 began on July 31, 2005 (CH2M HILL 2015a). Table 1 provides a chronological summary of injection activities implemented for IM-3 through 2018.

Currently, samples are collected from OWs and CWs according to the following schedule:

- Nine OWs (OW-01S, OW-01M, OW-01D, OW-02S, OW-02M, OW-02D, OW-05S, OW-05M, and OW-05D) in the East Mesa Injection Area are sampled annually during the fourth quarter for a limited suite of constituents.

- In addition, six of the OWs (OW-01M, OW-01D, OW-02M, OW-02D, OW-05M, and OW-05D) are sampled for a full suite of constituents, one cluster at a time, on a triennial (once every 3 years) schedule. By the end of each 3-year period, all middle- and deep-zone OWs are sampled for a full suite of constituents. The triennial sampling occurs during the fourth quarter with the annual sampling.
- Eight CWs are sampled annually during the fourth quarter for a full suite of constituents.

Table 2 provides a summary of well construction and sampling method information for the wells in the CMP network. The full suite of constituents includes Cr(VI), chromium, metals, specific conductance, total dissolved solids (TDS), turbidity, alkalinity, ammonia, and major inorganic cations and anions. The limited suite of constituents is similar to the full suite except that several metals/cations, total alkalinity, and ammonia are omitted.

Groundwater elevation data and field water quality parameters—including specific conductance, temperature, pH, oxidation reduction potential, dissolved oxygen, and turbidity—are also measured during each monitoring event.

2 SUMMARY OF 2018 ACTIVITIES

This section provides an overview of activities completed for the 2018 annual period. The annual monitoring event was conducted between December 3 and 4, 2018, and field activities included the following:

- Manual water level measurements and field water quality parameter data were collected before sampling.
- Water quality samples were collected from nine OWs and eight CWs.
- Field duplicate samples were collected at wells CW-01M and CW-04M to assess field sampling and analytical quality control (QC).

Groundwater elevation data were also collected continuously using pressure transducers installed in five of the 17 CMP wells: OW-01S, OW-02S, OW-05S, OW-05M, and OW-05D. Data from the transducers were downloaded approximately monthly during the 2018 annual period. Manual water level measurements were also collected from the 17 CMP wells quarterly.

In addition to the annual monitoring event completed in December 2018, a supplemental sampling event was conducted in June 2018 as part of the ongoing trial of alternative purging/sampling approaches (i.e., micro-purge/minimal drawdown method versus the three-well-volume purge method) for groundwater data collection at the Site (PG&E 2015; DTSC 2017). This supplemental sampling event included 10 of the 17 CMP wells—all eight of the CW wells and two of the nine OW wells (CW-01M, CW-01D, CW-02M, CW-02D, CW-03M, CW-03D, CW-04M, CW-04D, OW-05S, and OW-05M)—with longer (40- or 50-foot) screen intervals. The eight CWs and OW-05M were sampled for the full suite of constituents as described in Section 1.3. Well OW-05S was sampled for the limited suite of constituents.

Field activities were performed in accordance with existing standard operating procedures for the Site, which are available in the Basis of Design Report/Final (100%) Design Submittal for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California (CH2M HILL 2015b). On April 6, 2017, DTSC approved the use of the minimal drawdown (low-flow) method for groundwater sample collection from seven of the 17 CMP wells—seven of the nine OW wells (OW-01S, OW-01M, OW-01D, OW-02S, OW-02M, OW-02D, and OW-05D) (DTSC 2017). These approved wells were sampled using low-flow methodology during the annual monitoring event conducted in December 2018. The remaining 10 CMP wells have not been approved for low-flow sampling and are part of the ongoing sample method trials. During the supplemental (June 2018) and annual (December 2018) monitoring events, these 10 CMP wells were sampled using both the low-flow method and the traditional three-well-volume purge method. For the purpose of documenting compliance under the CMP, only the results obtained using the approved sampling method (i.e., three-well-volume purge) are reported herein for the 10 CMP wells still undergoing sample method trials. Results of the sample method trials will be evaluated and documented in a separate technical memorandum to be submitted to DTSC and DOI in 2019.

CMP groundwater samples were analyzed by Asset Laboratories in Las Vegas, Nevada; BC Laboratories, Inc. in Bakersfield, California; or Eurofins Calscience in Garden Grove, California, which are California-certified analytical laboratories. Analytical methods, sample volumes and containers, sample preservation, and QC sample requirements were in accordance with the PG&E Program Quality

Assurance Project Plan, Revision 3 (QAPP; CH2M HILL 2014) and Addendum to the PG&E Program Quality Assurance Project Plan for Projects at the Topock Chromium Site, Revision 3 (QAPP Addendum; Critigen 2018). Moreover, data validation and management were conducted in accordance with the quality assurance and QC requirements set forth in the QAPP and QAPP Addendum.

3 SUMMARY OF 2018 RESULTS

This section summarizes the results of the CMP groundwater sampling activities conducted in 2018. Nine OWs and eight CWs were sampled during the annual period. Locations of the CMP groundwater monitoring well clusters are shown on Figure 2. Groundwater samples collected from these wells were analyzed for Cr(VI), chromium, metals, specific conductance, TDS, turbidity, alkalinity, ammonia, and/or major inorganic cations and anions. These results are presented in Section 3.1, and the findings from the laboratory data quality review are provided in Section 3.2. Water level measurement and field water quality parameter data collected as part of sampling are presented in Section 3.3. Laboratory analytical reports and field data collection sheets for the 2018 annual period are included in Appendices A and B, respectively.

3.1 Analytical Results

Analytical results for Cr(VI) and chromium, other metals, and general chemistry parameters are presented in Tables 3, 4, and 5, respectively, and are discussed below. Where applicable, these results have been compared to the water quality objectives (WQOs)/action levels set forth in the Compliance Monitoring Plan Addendum (CH2M HILL 2005b) and updated in the revised contingency plan flowchart submitted by PG&E on August 8, 2006 (PG&E 2006). The contingency plan and associated flowchart address groundwater quality changes potentially associated with the IM-3 injection system and specify threshold concentrations for Cr(VI), chromium, TDS, and pH that would trigger contingency actions. The target pH range for the CMP contingency plan was updated again in 2008 with the approval of the Water Board and DTSC (Water Board 2008; DTSC 2008).

3.1.1 Hexavalent Chromium and Chromium

Table 3 summarizes the Cr(VI) and chromium analytical results for groundwater in the shallow, middle, and deep wells sampled during the 2018 annual period. These results are discussed below.

- For shallow wells:
    - Cr(VI) was reported at concentrations ranging up to 15 micrograms per liter (µg/L). The maximum detected Cr(VI) concentration was observed in the December 2018 sample collected from OW-02S.
    - Chromium was reported at concentrations ranging up to 17 µg/L. The maximum detected chromium concentration was observed in the December 2018 sample collected from OW-02S.
- For middle wells:
    - Cr(VI) was reported at concentrations ranging up to 3.9 µg/L. The maximum detected Cr(VI) concentration was observed in the December 2018 sample collected from CW-03M.
    - Chromium was reported at concentrations ranging up to 4.8 µg/L. The maximum detected chromium concentration was observed in the December 2018 sample collected from CW-03M.

- For deep wells:
    - Cr(VI) was reported at concentrations ranging up to 1.1 µg/L (estimated value). The maximum detected Cr(VI) concentration was observed in the duplicate sample collected from CW-03D in June 2018.
    - Chromium was reported at concentrations ranging up to 1.1 µg/L. The maximum detected chromium concentration was observed in the December 2018 samples collected from OW-02D and CW-03D.

Cr(VI) and chromium concentrations in samples collected during the 2018 annual period did not exceed the WQO trigger levels of 32 µg/L and 28 µg/L, respectively. Thus, the contingency plan was not triggered for these constituents.

3.1.2 Other Metals and General Chemistry

Other metals/cation results for groundwater samples collected during the 2018 annual period are summarized in Table 4. Detected metals were arsenic, barium, manganese, molybdenum, nickel, selenium, vanadium, zinc, boron, calcium, total and dissolved iron, potassium, magnesium, and sodium. In general, concentrations of these metals observed during the 2018 annual period were similar to those observed historically.

General chemistry results—including specific conductance, field pH, TDS, turbidity, alkalinity, ammonia, and major anions—for groundwater samples collected during the 2018 annual period are summarized in Table 5. TDS concentrations ranged from 1,900 milligrams per liter (mg/L; December 2018 sample from OW-02S) to 4,400 mg/L (June 2018 sample from CW-03M), while field pH measurements ranged from 6.9 (December 2018 sample from OW-01S) to 8.1 (June 2018 samples from CW-03D and CW-02D). During the 2018 annual period, analytical results for the sampled wells met the WQOs for TDS (i.e., less than 10,800 mg/L) and pH (i.e., between 6.2 and 9.2). Thus, the contingency plan was not triggered for these parameters.

3.2 Analytical Data Quality Review

The laboratory analytical data generated during the 2018 annual period were independently reviewed by project chemists to assess data quality and identify deviations from analytical requirements. The quality assurance and QC requirements are outlined in the QAPP and QAPP Addendum (CH2M HILL 2014 and Critigen 2018, respectively). A detailed discussion of data quality for CMP sampling data is presented in the data validation reports, which are maintained in the project file and available upon request.

3.2.1 Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike (MS)/matrix spike duplicate (MSD) samples were performed as required by the analytical method. In some cases, samples from other projects (i.e., not collected from the Site) were used to fulfil the laboratory's QC batch requirements. When CMP samples were selected for MS/MSD analyses, recoveries were within QC criteria with the following exceptions:

- Dissolved boron was recovered at concentrations greater than QC limits in one or more of the MS, MSD, or post-digestion spike (PDS) of samples: CW-02D-3V-Q418, CW-04D-3V-Q418, CW-01M-3V-Q418/MW-900-Q418, and OW-05M-3V-Q418. The associated sample results were qualified as estimated detects (“J” flag).
- Dissolved iron was recovered at concentrations less than QC limits in the MS of sample CW-01D-3V-Q218. The associated sample result was qualified as an estimated detect (“J” flag).
- Dissolved copper was recovered at concentrations less than QC limits in one or more of the MS, MSD, or PDS of samples: CW-01D-3V-Q218, CW-04D-3V-Q218, CW-04D-3V-Q418, OW-05M-3V-Q418, and CW-02D-3V-Q418. The associated sample results were qualified as estimated non-detects (“UJ” flag).
- Dissolved zinc was recovered at concentrations less than QC limits in the MS, MSD, and/or PDS of samples CW-04D-3V-Q218, CW-04D-3V-Q418, OW-05M-3V-Q418, and CW-02D-3V-Q418. The associated sample results were qualified as estimated non-detects (“UJ” flag).
- Serial dilutions performed on samples CW-02D-3V-Q218 for dissolved magnesium and iron, CW-03D-3V-Q218/MW-902-Q218 for dissolved potassium, and OW-05S-3V-Q218 for dissolved sodium did not meet criteria. The associated sample results were qualified as estimated detects (“J” flag) or non-detects (“UJ” flag).

3.2.2 Quantitation and Sensitivity

All method and analyte combinations met the project decision-making requirements.

3.2.3 Holding Time

All samples were analyzed within the QAPP-recommended holding times.

3.2.4 Field Duplicates

Field duplicate samples were collected and analyzed, and met QC criteria with exceptions as follows:

- Dissolved manganese demonstrated a relative percent difference (RPD) greater than QC limits in the field duplicate pair of samples CW-01M-3V-Q418/MW-900-Q418. The detected results were qualified as estimated (“J” flag).
- Cr(VI) demonstrated an RPD greater than QC limits in the field duplicate pair of samples CW-03D-3V-Q218/MW-902-Q218. The detected result was qualified as estimated (“J” flag) and the non-detect result was qualified as an estimated non-detect (“UJ” flag).
- Turbidity demonstrated an RPD greater than QC limits in the field duplicate pair of samples CW-04M-3V-Q418/MW-901-Q418. The results were qualified as estimated (“J” flag).

3.2.5 Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination that resulted in data qualification.

3.2.6 Equipment Blanks

Equipment blanks were collected at the frequency required by the QAPP and were free of contamination that resulted in data qualification.

3.2.7 Laboratory Duplicates

All laboratory duplicate acceptance criteria for the analytical methods were met.

3.2.8 Laboratory Control Sample

Laboratory control samples were analyzed as required, and accuracy and precision criteria were met or did not require data qualification.

3.2.9 Calibration

Initial calibration curves, blanks, and verification analyses were performed at the required frequency and met QC criteria or did not require data qualification with the following exception:

- Dissolved copper was detected in a continuing calibration blank associated with sample OW-05M-3V-Q218. The associated sample result was qualified as non-detect at the reported sample concentration ("UB" flag).

3.2.10 Conclusion

Except as noted above, the analyses and data quality met the QAPP and laboratory method QC criteria. The data are considered usable, as qualified during the data validation process, and are of adequate quantity and quality for the purpose of the CMP.

3.3 Field Parameter Data

Water level was measured at each well before purging and sampling. In addition, water quality parameters, including specific conductance, temperature, pH, oxidation reduction potential, dissolved oxygen, and turbidity, were measured during purging using a field water quality instrument and flow-through cell to determine sufficient well purging. Field water quality data collected during the 2018 annual period are summarized in Table 6. These data represent the final field water quality measurements collected before sampling. Field data collection sheets for the 2018 annual period are provided in Appendix B.

3.4 ARAR Monitoring Requirements

Appendix C identifies the laboratory that performed each analysis and lists the following information for the 2018 annual period, as required by the ARARs:

- Sample location
- Sample identification number

- Sampler name
- Sample date
- Sample time
- Laboratory performing analysis
- Analysis method
- Parameter
- Analysis date
- Laboratory technician
- Result unit
- Sample result
- Reporting limit
- Method detection limit.

4 INFLUENCE OF TREATED WATER ON AQUIFER WATER QUALITY

The influence of injection operations on aquifer water quality in the East Mesa Injection Area and vicinity is assessed through the comparison of groundwater chemistry measured in the OWs and CWs, both pre-injection (baseline) and post-injection, to chemistry of the injected water.

The subsurface injection of effluent water (treated groundwater) from the IM-3 groundwater treatment system was initiated on July 31, 2005. Since that time, PG&E has conducted routine sampling, including effluent sampling, of the IM-3 treatment system in compliance with the WDRs for IM-3, previously enforced under WDR Order No. R7-2006-0060 and currently enforced under the ARARs. Analytical results from the effluent sampling are used to establish the baseline chemistry for treated water injected into the IM-3 injection well field.

Table 7 provides selected treated water analytical results from system sampling events conducted on August 29, 2005; April 7, 2010; October 6, 2015; and September 30, 2018. As discussed in previous CMP reports, while concentrations of some parameters vary in the effluent samples, a number of constituents have exhibited relatively consistent concentrations over the duration of injection operations (e.g., Cr[VI], chromium, fluoride, dissolved molybdenum, nitrate/nitrite as nitrogen, sulfate, and TDS [CH2M HILL 2015a]). These seven constituents are used to characterize the injected water and serve as a basis for determining whether a given groundwater monitoring well is being affected by injection operations. Based on review of the August 2005 through September 2018 effluent sampling results, the injected water exhibits the following general characteristics:

- Cr(VI): typically non-detect (or below 1.0 µg/L)
- Chromium: typically non-detect (or below 1.0 µg/L)
- Fluoride: approximately 2 mg/L
- Dissolved molybdenum: approximately 20 µg/L
- Nitrate/nitrite as nitrogen: approximately 3 mg/L
- Sulfate: approximately 500 mg/L
- TDS: approximately 4,000 mg/L.

These chemistry characteristics serve as a general basis for comparison, but should not be considered statistically representative of the effluent water quality over time.

Pre-injection conditions in the East Mesa Injection Area and vicinity were established based on the results of baseline sampling conducted for the OWs (July 27 and 28, 2005) and CWs (September 15, 2005). Analytical results for the baseline samples are presented in Table 7 and are considered representative of groundwater unaffected by injection operations. Comparison of pre-injection groundwater quality to the injected water profile shows that there are some similarities in constituent concentrations. For example, most of the baseline samples collected from deep wells (OW-01D, OW-02D, OW-05D, CW-03D, and CW-04D) contained no detectable Cr(VI) or chromium, similar to the injected water (CH2M HILL 2015a).

However, other constituents are present at significantly different concentrations in the injected water versus pre-injection groundwater. Thus, when considering the entire suite of seven constituents, as shown in Table 7, it is evident that the injected water and pre-injection groundwater have distinct chemistries.

In contrast, Table 8 compares constituent concentrations in the injected water (treated groundwater) to those measured in the OWs and CWs during the most recent (2018 annual) monitoring event (i.e., more than 10 years following the initiation of injection operations). Unlike the pre-injection (July through September 2005) well monitoring results, the 2018 annual monitoring results demonstrate that water chemistry measured in a majority of the OWs and CWs either has shifted towards or been replaced by the chemistry of the injected treated water. This conclusion is supported by the concentration versus time plots presented on Figures 3A through 3E for the OWs and CWs. These plots, which include data from baseline through the 2018 annual period, illustrate shifts from baseline concentrations towards the injected treated water chemistry that indicate arrival of the injected water front.

In general, the following 12 wells currently display the characteristics of injected water and are considered to be representative of locations and depths where this water has largely displaced ambient groundwater: OW-01M, OW-01D, OW-02M, OW-02D, OW-05M, OW-05D, CW-01M, CW-01D, CW-02M, CW-02D, CW-03D, and CW-04D. Four additional wells (OW-01S, OW-05S, CW-03M, and CW-04M) exhibit gradually increasing trends in groundwater concentrations of sulfate, TDS, and/or nitrate/nitrite as nitrogen that are indicative of potential injected water influence. In the past, shallow observation well OW-02S demonstrated little or no water quality effects due to injection operations compared to the other CMP wells (i.e., concentrations of sulfate and TDS were relatively stable and consistent with baseline levels). However, over the past few years, sulfate and TDS concentrations in OW-02S have increased steadily while molybdenum concentrations have decreased, approaching the levels observed in the injected water (Figure 3A).

5 INJECTION WELL OPERATIONAL ASSESSMENT

5.1 Injection Well Performance

The primary performance metric for the IM-3 injection well field is sufficient capacity to accept treated water from the IM-3 treatment plant. Table 9 lists the average injection rate, monthly and cumulative total volumes of water injected, and the primary injection well in service from August 2005 through December 2018. In addition, Table 1 summarizes operational status of the IM-3 injection wells from July 2005 through December 2018.

Injection well performance has been monitored since the wells were put into service and is tracked using specific injectivity as the metric. Specific injectivity is defined as the rate of injection (measured in gallons per minute) per unit of draw-up/water level rise in the well (measured in feet). The performance of injection wells typically declines over time due to a variety factors (e.g., plugging of the well screen, sand pack, and/or surrounding formation by sediments, mineral precipitates, or biological deposits; or air entrapment in the formation).

Manganese oxide precipitation is believed to be the primary cause of performance decline in the IM-3 injection wells (CH2M HILL 2015a). Since 2010, the IM-3 treatment plant has been operated to reduce manganese concentrations in the effluent (treated) water (i.e., generally to less than 10 µg/L) and to decrease pH of the effluent water to 7.0 via acidification (CH2M HILL 2015a). If a significant decrease in specific injectivity is observed, the injection wells are backwashed at a higher frequency or rehabilitated using Aqua Gard™ or other methods (CH2M HILL 2015a). Figure 4 shows the history of IM-3 well performance trends and well maintenance events. Aqua Gard™ treatments were conducted in November 2016, January 2017, April 2017, August 2017, November 2017, and March 2018.

Currently, each injection well (IW-02 and IW-03) has sufficient capacity to individually manage 100 percent of the effluent water flow from the IM-3 treatment plant. Furthermore, the system has adequate spare capacity, and the maintenance program has been effective in maintaining sufficient injection capacity for operation.

5.2 Water Level Measurements

Table 10 summarizes the manual water level measurements and calculated groundwater elevations from the quarterly well gauging events conducted in 2018. In compliance with Condition No. 2 of DTSC's conditional approval letter dated September 3, 2009 (DTSC 2009), the IM-3 Plant Manager confirmed that the IM-3 system was operating normally both the day before and the day of manual water level collection, with no injection well backwashing events or unplanned shutdowns.

In addition to the manual water level measurements, water level data were collected continuously (with readings recorded every 30 minutes) using pressure transducers deployed in select wells (OW-1S, OW-2S, OW-5S, OW-5M, and OW-5D). Hydrographs produced using the transducer data are presented on Figures 5A through 5C, and illustrate groundwater elevation trends and vertical hydraulic gradients observed over the biennial period (2017-2018) for specific OWs.

Figure 6A shows groundwater elevations for the three shallow wells based on the fourth quarter (December 3, 2018) manual water level measurements. The shallow-zone water level elevations are not contoured due to an insufficient number of wells to satisfactorily illustrate a groundwater potentiometric surface under injection conditions. Groundwater elevation maps for the middle and deep wells are provided as Figures 6B and 6C, respectively. The data that were plotted and/or used for contouring were the December 3, 2018 (fourth quarter) manual water level measurements collected within a 1-hour period.

As shown on Figure 2, the IM-3 injection well field is located in the uplands (East Mesa) area of the Site. Based on site-wide groundwater elevation data, regional groundwater flow in the uplands portion of the Site is generally to the east/northeast (CH2M HILL 2015b). On a local scale, as shown on Figures 6B and 6C, injections of treated water have resulted in a potentiometric mound in the middle and deep zones centered on the IM-3 injections wells. Consistent with previous observations, the potentiometric mound is generally elliptical in shape, with the major axis running from approximately southwest to northeast (CH2M HILL 2015a, Arcadis U.S., Inc. [Arcadis] 2016, 2017, 2018). The potentiometric mound appears to be stable at a height of approximately 1 foot or less above the surrounding water level (based on the December 3, 2018 manual water level measurements [see Figures 6B and 6C]), which is consistent with information reported previously (CH2M HILL 2015a; Arcadis 2016, 2017, 2018). Groundwater elevation contour maps generated using fourth quarter 2016 (December 6, 2016) and fourth quarter 2014 (October 21, 2014) data are provided in Appendix D for comparison. As shown by these figures, the hydraulic response of middle- and deep-zone monitoring wells to injection activity has been relatively predictable over the past 4 years, and significant change is not anticipated with ongoing injections at the current rate.

Table 11 summarizes the vertical gradients calculated using the December 3, 2018 manual water level measurement data. In general, average vertical gradients have been upward at the OW and CW clusters since injection began (CH2M HILL 2015a). As shown in Table 11, upward vertical gradients were observed between depth intervals (i.e., deep to middle and middle to shallow) in a given well cluster, consistent with historical data.

Calculated vertical gradients were generally of the same order of magnitude between well clusters or between the different depth intervals (Table 11). The magnitude of the vertical gradient between OW-02D and OW-02M was slightly greater than that for other well pairs, which is consistent with the higher degree of mounding observed in the deep zone at the OW-02 cluster based on the December 3, 2018 groundwater elevation data. Because the injection wells are screened in the deeper portions of the aquifer, the head increase resulting from the injection of treated groundwater is typically greater in the deep and middle zones compared to the shallow zone (CH2M HILL 2015a).

6 SUMMARY AND RECOMMENDATIONS

The injection well field has operated successfully since July 31, 2005 and has proven to be an effective strategy for managing treated groundwater generated through implementation of IM-3 at the Site. The following summarizes the performance highlights of the injection system:

- **Predicted aquifer response**: Hydraulic response of the aquifer to injection activity is consistent with expectations. Potentiometric mounding with a magnitude of approximately 1 foot or less occurs primarily in the middle and deep aquifer zones in the immediate vicinity of the injection wells, dissipating with distance from the injection wells. Outside of the injection area, gradients indicate groundwater flow generally to the east/northeast, consistent with regional groundwater flow in the uplands portion of the Site.
- **No adverse effect to aquifer water quality**: There are no indications of adverse effects to aquifer water quality as a result of injections. In general, water quality in the shallow, middle, and deep zones has improved (i.e., decreasing Cr[VI] and chromium concentrations) where the injected water has displaced native groundwater.
- **Successful injection well operation and maintenance**: During the seventh biennial period, sufficient injection capacity was maintained with no significant injection well performance issues. Well maintenance using backwashing and Aqua Gard^{TM} treatment continues to be effective.
- **Improved environment and safer operations**: Operating the injection wells reduces the adverse environmental and safety impacts associated with the trucking of treated groundwater to a permitted offsite facility. Reduced truck traffic results in lower vehicle emissions and reduces the chance of accidents.
- **Water quality objectives achieved**: During the 2018 annual period, no sample results exceeded the WQOs for Cr(VI), chromium, pH, or TDS.

Based on the above, PG&E plans continued operation of the IM-3 injection well field for the management of treated water under DTSC and DOI oversight. The next annual CMP monitoring event will occur in October 2019, and the groundwater monitoring report for this event will be submitted by January 15, 2020. The next PAR will cover the 2019 to 2020 biennial period, and will be combined with the 2020 annual CMP report for the IM-3 injection well field that will be submitted by January 15, 2021.

In addition, as discussed in Section 2, supplemental sampling has been completed at 10 of the CMP wells as part of the trial of alternative purging/sampling approaches for groundwater data collection at the Site. Results of the sample method trials will be evaluated and documented in a separate technical memorandum to be submitted to DTSC and DOI in 2019.

7 REFERENCES

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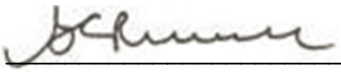
8 CERTIFICATION

PG&E submitted a signature delegation letter to the DOI and the Water Board on February 27, 2013 (PG&E 2013). The letter delegated PG&E signature authority to Ms. Sheryl Bilbrey, Ms. Yvonne Meeks, and Mr. Curt Russell for correspondence regarding required ARARs.

Certification Statement:

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Signature: 

Name: Curt Russell

Company: Pacific Gas and Electric Company

Title: Topock Environmental Remediation Project Manager

Date: January 15, 2019

TABLES

Table 1

Operational Status of Interim Measures No. 3 Injection Wells From July 2005 through December 2018

Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report

Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Time Period	Injection Status
July 31, 2005 to Fourth Quarter 2005	Injection occurred at IW-02.
First Quarter 2006	Injection occurred primarily at IW-02, except during intervals of operational testing, when injection was divided equally between IW-02 and IW-03.
Second Quarter 2006	Injection occurred at IW-02.
Third Quarter 2006	In August 2006, IW-02 went offline for routine maintenance, and injection commenced at IW-03.
Fourth Quarter 2006	Injection occurred at IW-03, except during routine maintenance.
First Quarter 2007	Injection occurred at IW-03 and transitioned over to IW-02 on March 8.
Second Quarter 2007	Injection occurred at IW-03 from April 3 through June 20. Injection switched to IW-02 on June 20 and continued through July 20, 2007.
Third Quarter 2007	Injection occurred at IW-03 after July 20. Injection occurred at IW-02 on August 30 for an injection test and then returned to IW-03 after August 31.
Fourth Quarter 2007	Injection occurred at IW-03 and then switched to IW-02 on September 25 for routine maintenance. Injection returned to IW-03 after October 9.
First Quarter 2008	Injection occurred at IW-03 only. From February 5 through February 13, well maintenance activities were conducted at IW-02.
Second Quarter 2008	Injection occurred at IW-03 only. IM-3 system offline from April 21 through April 28 due to routine maintenance. Backwashing was performed at IW-03 on April 9, May 7, May 15, May 22, June 3, and June 4, 2008.
Third Quarter 2008	Injection occurred primarily at IW-03. Injection also occurred at IW-02 for short interval on July 25 and from August 12 through August 31, 2008. Backwashing was performed at IW-03 on June 17, June 27, July 9, July 15, July 17, July 18, August 12, August 13, September 2, and September 3, 2008. Backwashing was performed at IW-02 on September 9 - September 11, 2008.
Fourth Quarter 2008	Injection occurred at IW-03 and then switched to IW-02 on September 23. Injection returned to IW-03 on October 7 and switched back to IW-02 on October 21. Injection primarily occurred at IW-02 until November 11 when it switched to IW-03 until December 3, 2008. Injection continued at IW-02 until December 16, 2008 and occurred concurrently and continued at IW-03 on December 11, 2008.
First Quarter 2009	Injection switched to IW-02 on December 30, 2008. On January 13, 2009 injection transitioned to IW-03. Backwashing events were performed periodically during the intervals when each injection well was offline. Routine and scheduled maintenance occurred December 18, 2008 and January 21, 2009 at which time both wells were offline.
Second Quarter 2009	Injection continued at IW-03 until April 20, 2009. Injection ceased from April 20, 2009 to April 27, 2009 due to routine maintenance after which injection continued at IW-03 until May 26, 2009 when it transitioned to IW-02. Injection continued at IW-02 until June 9, 2009 when it switched to IW-03. Injection returned to IW-02 on June 24, 2009.
Third Quarter 2009	IM-3 injection alternates between the two wells approximately every two weeks. Injection continued at IW-02 until July 8, when it transitioned to IW-03. Injection ceased from July 23 to 27, 2009 when it continued at IW-03 until September 9, 2009. Unplanned downtime occurred from September 9 - 14, 2009. On September 16, 2009 injection continued at IW-02, except during times of routine maintenance or otherwise mentioned.
Fourth Quarter 2009	Injection occurred at IW-02 until November 25, 2009 when it switched to IW-03. Injection continued at IW-03, except during times of routine maintenance.
First Half 2010	Injection occurred mainly at IW-03 until March 3, 2010. Beginning March 3, 2010, IM-3 injection alternated between the two wells approximately every two weeks until April 20, 2010 for a planned shutdown. On April 22, 2010, injection resumed at IW-03 and alternated between the two wells approximately every two weeks. Backwashing was performed periodically during the intervals when each injection well was offline.
Second Half 2010	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: July 22 through August 25, August 30 through September 7, September 16 through October 15, November 5 through 18, and December 17 through 31, 2010.
First Half 2011	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: January 27 through February 10, February 23 through March 7, March 30 through April 20, May 6 through June 7, and June 22 through 28, 2011. Backwashing was performed periodically during the intervals when each injection well was offline. A planned shutdown occurred April 25 through 29 and June 28 through 30.
Second Half 2011	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: July 14 through August 3, August 10 through 13, September 11 through 22, October 6 through10; and October 27 through December 31. Backwashing was performed periodically during the intervals when each injection well was offline.
First Half 2012	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: January 1 through January 6, 2012; February 2 through February 16, 2012; March 2 through April 5, 2012; May 10 through May 21, 2012; May 29 through June 1, 2012; June 14, 2012; and June 21 through June 27, 2012.
Second Half 2012	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: July 18 through July 25, 2012; August 1 through August 13, 2012; August 17 through August 22, 2012; August 31 through September 26, 2012; and September 29 through October 9, 2012.

Table 1

Operational Status of Interim Measures No. 3 Injection Wells From July 2005 through December 2018

Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report

Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Time Period	Injection Status
First Half 2013	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: March 5 through March 14, 2013; April 8 through May 22, 2013; June 24 through June 25, 2013; and June 29 through June 30, 2013.
Second Half 2013	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: July 1 through 9, 2013; July 31 through August 12, 2013; October 22 through November 6, 2013; November 26 through December 12, 2013; and December 28 through 31, 2013.
First Half 2014	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: January 6, 2014; January 16 through January 29, 2014; April 17 through 23, 2014; and May 10 through June 22, 2014, and June 25, 2014.
Second Half 2014	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: July 21 through 30, 2014; September 23 through 25, 2014; and November 19 through 24, 2014.
First Half 2015	Injection occurred primarily at IW-03 with the exception of the following periods when it occurred primarily at IW-02: January 1 through 14, 2015; March 5 through 31, 2015; April 7 and 8, 2015; June 11, 2015; and June 26, 2015. The system was shut down from April 28, 2015 to May 4, 2015 for scheduled semiannual facility maintenance.
Second Half 2015	Injection occurred primarily at IW-02 with the exception of the following periods when it occurred primarily at IW-03: July 1 through 19, 2015; August 31 through September 1, 2015; and September 26 through October 13, 2015.
First Half 2016	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: January 1 through 31, 2016; February 1 through 25, 2016; and March 1 through 4, 2016.
Second Half 2016	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: July 1 through 31, 2016; August 1, 2016; November 12, 2016; and December 1 through 11, 2016.
First Half 2017	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: January 28, 2017; April 7 through 27, 2017; and April 29 through June 30, 2017.
Second Half 2017	Injection occurred primarily at IW-02 with the exception of the following periods when it primarily occurred at IW-03: July 1 through August 14, 2017; August 26 through 27, 2017; and November 18 through December 31, 2017.
First Half 2018	Injection occurred primarily at IW-03 with the exception of the following periods when it primarily occurred at IW-02: March 16, 2018; March 18 through April 2, 2018; and April 6 through May 6, 2018.
Second Half 2018	Injection occurred primarily at IW-03 with the exception of the following period when it primarily occurred at IW-02: December 14 through December 28, 2018.

Table 2
Well Construction and Sampling Summary for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Well ID	Site Area	Measuring Point Elevation (feet amsl)	Screen Interval (feet bgs)	Well Casing (inches)	Depth to Water (feet btoc)	Sampling System	Typical Purge Rate	Typical Purge Volume (gallons)	Pump Depth (feet btoc)	Transducer Status
IM Compliance Wells										
CW-01M	East Mesa	566.07	140 - 190	2 (PVC)	109.44	Temp Redi-Flo AR	2 gpm	42	165.0	
CW-01D	East Mesa	566.46	250 - 300	2 (PVC)	109.51	Temp Redi-Flo AR	3 gpm	98	275.0	
CW-02M	East Mesa	549.45	152 - 202	2 (PVC)	93.08	Temp Redi-Flo AR	2 gpm	56	177.0	
CW-02D	East Mesa	549.43	285 - 335	2 (PVC)	92.58	Temp Redi-Flo AR	3 gpm	134	320.0	
CW-03M	East Mesa	534.10	172 - 222	2 (PVC)	78.05	Temp Redi-Flo AR	2 gpm	74	197.0	
CW-03D	East Mesa	534.14	270 - 320	2 (PVC)	77.40	Temp Redi-Flo AR	3 gpm	134	295.0	
CW-04M	East Mesa	518.55	119.5 - 169.5	2 (PVC)	62.00	Temp Redi-Flo AR	2 gpm	56	144.5	
CW-04D	East Mesa	518.55	233 - 283	2 (PVC)	61.75	Temp Redi-Flo AR	3 gpm	124	258.0	
IM Observation Wells										
OW-01S	East Mesa	550.21	83.5 - 113.5	2 (PVC)	94.03	Temp Redi-Flo AR	500 mL/min	low-flow	103.0	Active
OW-01M	East Mesa	550.36	165 - 185	2 (PVC)	93.92	Temp Redi-Flo AR	500 mL/min	low-flow	175.0	
OW-01D	East Mesa	550.36	257 - 277	2 (PVC)	93.50	Temp Redi-Flo AR	500 mL/min	low-flow	267.0	
OW-02S	East Mesa	548.88	71 - 101	2 (PVC)	92.70	Temp Redi-Flo AR	500 mL/min	low-flow	97.0	Active
OW-02M	East Mesa	548.52	190 - 210	2 (PVC)	92.08	Temp Redi-Flo AR	500 mL/min	low-flow	200.0	
OW-02D	East Mesa	549.01	310 - 330	2 (PVC)	91.08	Temp Redi-Flo AR	500 mL/min	low-flow	320.0	
OW-05S	East Mesa	551.83	70 - 110	2 (PVC)	95.51	Temp Redi-Flo AR	1 gpm	8	107.0	Active
OW-05M	East Mesa	551.81	210 - 250	2 (PVC)	94.40	Temp Redi-Flo AR	2 gpm	80	120.0	Active
OW-05D	East Mesa	552.41	300 - 320	2 (PVC)	94.91	Temp Redi-Flo AR	500 mL/min	low-flow	310.0	Active

Notes:
Depth to water in each well was measured on December 3, 2018.
For the annual event, wells CW-01M, CW-01D, CW-02M, CW-02D, CW-03M, CW-03D, CW-04M, CW-04D, OW-05S, and OW-05M were purged and sampled using the three-well-volume method.
Wells OW-01S, OW-01M, OW-01D, OW-02S, OW-02M, OW-02D, and OW-05D were purged and sampled using the low-flow method.

Acronyms and Abbreviations:
amsl = above mean sea level
bgs = below ground surface
btoc = below top of casing
gpm = gallons per minute
ID = identification
IM = Interim Measures
mL/min = milliliters per minute
PVC = polyvinyl chloride
Temp Redi-Flo AR = temporary adjustable-rate electric submersible pump

Table 3
Chromium Results for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

		Method:	USEPA 218.6	USEPA 200.8
Location ID	Sample Date		Hexavalent Chromium (µg/L)	Chromium (µg/L)
CW-01M	06/04/18		0.4	1.7
CW-01M	12/03/18		1.4	1.5
CW-01M	12/03/18	(FD)	1.3	1.3
CW-01D	06/04/18		ND (0.2)	ND (1.0)
CW-01D	12/03/18		0.29	ND (1.0)
CW-02M	06/06/18		0.87	1.2
CW-02M	12/03/18		0.96	1.3
CW-02D	06/06/18		ND (0.2)	ND (1.0)
CW-02D	12/03/18		ND (0.2)	ND (1.0)
CW-03M	06/05/18		3.8	3.9
CW-03M	12/03/18		3.9	4.8
CW-03D	06/05/18		ND (0.2 J)	ND (1.0)
CW-03D	06/05/18	(FD)	1.1 J	ND (1.0)
CW-03D	12/03/18		ND (0.2)	1.1
CW-04M	06/05/18		1.2	1.5
CW-04M	12/04/18		1.3	2.0
CW-04M	12/04/18	(FD)	1.3	1.9
CW-04D	06/05/18		ND (0.2)	ND (1.0)
CW-04D	12/04/18		0.31	ND (1.0)
OW-01S	12/03/18		4.1	4.6
OW-01M	12/03/18		0.78	1.2
OW-01D	12/04/18		0.54	ND (1.0)
OW-02S	12/04/18		15	17
OW-02M	12/03/18		0.96	2.1
OW-02D	12/04/18		ND (0.2)	1.1
OW-05S	06/06/18		9.6	10
OW-05S	12/04/18		12	12
OW-05M	06/06/18		0.6	ND (1.0)
OW-05M	12/04/18		0.22	ND (1.0)
OW-05D	12/04/18		ND (0.2)	ND (1.0)

Note:
Hexavalent chromium and chromium samples are field filtered.

Acronyms and Abbreviations:
µg/L = micrograms per liter
FD = field duplicate
ID = identification
J = concentration or reporting limit estimated by laboratory or data validation
ND = parameter not detected at the listed reporting limit
USEPA = United States Environmental Protection Agency

Table 4
Metals Results for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Method:		Dissolved USEPA 200.7, 200.8, 245.1, 6010B																							
Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Boron	Calcium	Iron, total	Iron, dissolved	Potassium	Magnesium	Sodium
		µg/L																		mg/L						
CW-01M	6/4/2018	ND (50)	ND (0.5)	1.1	77	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	0.91	ND (0.2)	16	ND (1.0)	3.3	ND (0.5)	ND (0.5)	2.4	ND (10)	1.1	170	0.035	ND (0.02)	15	18	1,700
CW-01M	12/3/2018	ND (50)	ND (0.5)	1.2	87	ND (2.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	1.0 J	ND (0.2)	17	ND (1.0)	3.8	ND (0.5)	ND (0.5)	2.5	ND (10)	1.2 J	160	ND (0.02)	ND (0.02)	14	14	1,600
CW-01M	12/3/2018 (FD)	ND (50)	ND (0.5)	1.2	84	ND (2.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	2.3 J	ND (0.2)	16	ND (1.0)	3.9	ND (0.5)	ND (0.5)	2.3	ND (10)	1.2 J	150	ND (0.02)	ND (0.02)	13	16	1,500
CW-01D	6/4/2018	ND (50)	ND (0.5)	1.1	23	ND (2.5)	ND (0.5)	ND (0.5)	ND (1.0 J)	ND (5.0)	0.74	ND (0.2)	20	ND (1.0)	3.8	ND (0.5)	ND (2.5)	2.4	ND (10)	1.0	160	ND (0.02)	0.077 J	13	17	1,500
CW-01D	12/3/2018	ND (50)	ND (0.5)	1.2	24	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	ND (0.5)	ND (0.2)	20	ND (1.0)	4.0	ND (0.5)	ND (0.5)	2.3	ND (10)	1.1	150	ND (0.02)	ND (0.02)	14	18	1,500
CW-02M	6/6/2018	ND (50)	ND (0.5)	1.8	68	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	1.4	ND (0.2)	15	1.6	3.6	ND (0.5)	ND (0.5)	3.6	ND (10)	1.1	140	0.11	0.036	13	9.3	1,500
CW-02M	12/3/2018	ND (50)	ND (0.5)	2.0	67	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	1.6	ND (0.2)	15	ND (1.0)	3.7	ND (0.5)	ND (0.5)	3.6	ND (10)	1.1	130	ND (0.02)	ND (0.02)	12	9.7	1,500
CW-02D	6/6/2018	ND (50)	ND (0.5)	3.0	15	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	1.8	ND (0.2)	12	6.9	4.0	ND (0.5)	ND (0.5)	4.1	12	1.0	100	ND (0.02 J)	ND (0.02)	13	5.0 J	1,600
CW-02D	12/3/2018	ND (50)	ND (0.5)	2.8	16	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0 J)	ND (1.0)	2.1	ND (0.2)	12	ND (1.0)	3.8	ND (0.5)	ND (0.5)	3.9	ND (10 J)	1.1 J	110	ND (0.02)	ND (0.02)	13	6.0	2,300
CW-03M	6/5/2018	ND (50)	ND (0.5)	1.2	42	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (5.0)	1.1	ND (0.2)	27	ND (1.0)	2.4	ND (0.5)	ND (2.5)	2.7	ND (10)	1.3	190	0.11	0.032	16	13	1,900
CW-03M	12/3/2018	ND (50)	ND (0.5)	1.3	41	ND (2.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	2.2	ND (0.2)	30	1.2	2.7	ND (0.5)	ND (0.5)	2.7	ND (10)	1.0	170	0.74	ND (0.02)	18	11	1,600
CW-03D	6/5/2018	ND (50)	ND (0.5)	1.4	16	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (5.0)	1.8	ND (0.2)	15	ND (1.0)	3.2	ND (0.5)	ND (2.5)	2.5	ND (10)	1.0	75	ND (0.02)	ND (0.02)	12 J	4.7	1,800
CW-03D	6/5/2018 (FD)	ND (50)	ND (0.5)	1.5	17	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (5.0)	1.8	ND (0.2)	16	ND (1.0)	3.5	ND (0.5)	ND (2.5)	2.7	ND (10)	1.1	78	0.039	ND (0.02)	14 J	4.9	1,800
CW-03D	12/3/2018	ND (50)	ND (0.5)	1.5	15	ND (2.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	2.6	ND (0.2)	14	ND (1.0)	3.9	ND (0.5)	ND (0.5)	2.4	ND (10)	1.0	67	ND (0.02)	ND (0.02)	11	4.9	1,600
CW-04M	6/5/2018	ND (50)	ND (0.5)	2.2	110	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	2.4	ND (0.2)	10	ND (1.0)	3.3	ND (0.5)	ND (0.5)	3.5	ND (10)	0.97	200	0.053	ND (0.02)	15	14	1,600
CW-04M	12/4/2018	ND (50)	ND (0.5)	2.1	110	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	0.84	ND (0.2)	11	ND (1.0)	3.9	ND (0.5)	ND (0.5)	3.0	ND (10)	0.98	190	0.032	ND (0.02)	14	15	1,400
CW-04M	12/4/2018 (FD)	ND (50)	ND (0.5)	2.0	100	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	0.86	ND (0.2)	10	ND (1.0)	3.7	ND (0.5)	ND (0.5)	2.7	ND (10)	1.0	200	0.033	ND (0.02)	14	15	1,400
CW-04D	6/5/2018	ND (50)	ND (0.5)	2.8	19	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0 J)	ND (1.0)	1.2	ND (0.2)	19	ND (1.0)	3.7	ND (0.5)	ND (0.5)	3.2	ND (10 J)	1.1	140	ND (0.02)	ND (0.02)	14	8.6	1,700
CW-04D	12/4/2018	ND (50)	ND (0.5)	3.0	19	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0 J)	ND (1.0)	1.7	ND (0.2)	20	ND (1.0)	4.0	ND (0.5)	ND (0.5)	2.7	ND (10 J)	1.2 J	150	0.032	ND (0.02)	14	9.1	1,600
OW-01S	12/3/2018	--	--	--	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	--	--	980
OW-01M	12/3/2018	ND (50)	ND (0.5)	2.3	70	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	ND (0.5)	ND (0.2)	23	ND (1.0)	4.1	ND (0.5)	ND (0.5)	3.1	ND (10)	1.0	140	0.085	ND (0.02)	15	26	1,500
OW-01D	12/4/2018	ND (50)	ND (0.5)	1.2	30	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0)	ND (1.0)	1.0	ND (0.2)	21	1.4	3.8	ND (0.5)	ND (0.5)	2.2	ND (10)	1.1	160	0.46	ND (0.02)	16	24	1,500
OW-02S	12/4/2018	--	--	--	--	--	--	--	--	--	--	--	27	--	--	--	--	--	--	--	--	--	--	--	--	590
OW-02M	12/3/2018	--	--	--	--	--	--	--	--	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--	--	1,500
OW-02D	12/4/2018	--	--	--	--	--	--	--	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--	--	--	1,500
OW-05S	6/6/2018	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	670 J
OW-05S	12/4/2018	--	--	--	--	--	--	--	--	--	--	--	9.8	--	--	--	--	--	--	--	--	--	--	--	--	620
OW-05M	6/6/2018	ND (50)	ND (0.5)	0.86	39	ND (0.5)	ND (0.5)	ND (0.5)	ND (2.4 UB)	ND (1.0)	ND (0.5)	ND (0.2)	19	6.8	4.1	ND (0.5)	ND (0.5)	1.8	14	1.1	150	0.022	ND (0.02)	15	23	1,500
OW-05M	12/4/2018	ND (50)	ND (0.5)	0.74	40	ND (0.5)	ND (0.5)	ND (0.5)	ND (1.0 J)	ND (1.0)	ND (0.5)	ND (0.2)	22	ND (1.0)	3.9	ND (0.5)	ND (0.5)	ND (1)	ND (10 J)	1.1 J	160	0.18	ND (0.02)	17	26	1,500
OW-05D	12/4/2018	--	--	--	--	--	--	--	--	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--	--	1,500

Acronyms and Abbreviations:
-- = data not collected or available
µg/L = micrograms per liter
FD = field duplicate
ID = identification
J = concentration or reporting limit estimated by laboratory or data validation
mg/L = milligrams per liter
ND = parameter not detected at the listed reporting limit
UB = analyte considered non-detect at the listed value due to associated blank contamination
USEPA = United States Environmental Protection Agency

Table 5
Other Inorganics Results for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

	Method:	USEPA 120.1	Field	SM2540C	SM2130B	USEPA 300.0	USEPA 300.0	USEPA 300.0	SM4500-NO3F	SM2320B	SM4500-NH3G
Location ID	Sample Date	Specific Conductance (µmhos/cm)	pH (pH units)	Total Dissolved Solids (mg/L)	Turbidity (NTU)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Nitrate/Nitrite as Nitrogen (mg/L)	Alkalinity, total as $CaCO_3$ (mg/L)	Ammonia as Nitrogen (mg/L)
CW-01M	06/04/18	7,000	7.5	4,000	0.33	2,100	2.2	470	1.7	85	ND (0.2)
CW-01M	12/03/18	7,900	7.8	4,000	0.14	2,100	2.0	480	2.8	89	ND (0.2)
CW-01M	12/03/18 (FD)	7,900	--	4,100	0.15	2,100	2.1	480	2.9	91	ND (0.2)
CW-01D	06/04/18	7,100	7.7	4,200	0.46	2,100	2.4	480	3.0	66	0.75
CW-01D	12/03/18	8,000	7.7	3,900	0.16	2,100	2.2	480	2.5	76	ND (0.2)
CW-02M	06/06/18	7,200	7.9	4,100	0.79	2,100	3.0	490	2.7	58	ND (0.2)
CW-02M	12/03/18	7,800	7.7	3,900	0.41	2,100	2.8	480	2.8	60	ND (0.2)
CW-02D	06/06/18	7,200	8.1	4,200	0.47	2,100	1.7	480	2.7	64	ND (0.2)
CW-02D	12/03/18	7,900	7.7	3,900	0.47	2,100	1.8	480	2.9	61	ND (0.2)
CW-03M	06/05/18	7,600	7.7	4,400	2.4	2,300	3.3	490	2.5	52	ND (0.2)
CW-03M	12/03/18	8,600	7.7	4,100	19	2,300	3.5	510	2.3	52	ND (0.2)
CW-03D	06/05/18	7,200	8.1	4,100	0.36	2,000	2.5	470	3.0	64	ND (0.2)
CW-03D	06/05/18 (FD)	7,200	--	3,800	0.28	2,100	2.3	470	2.7	64	ND (0.2)
CW-03D	12/03/18	8,000	7.9	4,000	0.79	2,100	2.3	480	2.7	62	ND (0.2)
CW-04M	06/05/18	6,900	7.6	3,900	0.64	2,100	2.0	480	2.7	54	ND (0.2)
CW-04M	12/04/18	7,200	7.6	4,200	0.66 J	2,000	2.0	490	2.7	55	ND (0.2)
CW-04M	12/04/18 (FD)	7,200	--	4,100	0.86 J	2,000	2.0	490	2.8	55	ND (0.2)
CW-04D	06/05/18	7,000	7.9	4,000	0.39	2,100	2.8	470	2.7	59	ND (0.2)
CW-04D	12/04/18	7,400	7.6	4,200	0.6	2,100	2.8	480	2.8	59	ND (0.2)
OW-01S	12/03/18	7,100	6.9	3,900	3.7	1,900	0.94	430	2.8	--	--
OW-01M	12/03/18	7,900	7.6	3,800	3.3	2,100	2.3	480	2.8	83	ND (0.2)
OW-01D	12/04/18	7,400	7.9	4,100	11	2,100	2.2	490	2.5	76	ND (0.2)
OW-02S	12/04/18	3,300	7.9	1,900	6.4	910	3.1	140	3.0	--	--
OW-02M	12/03/18	7,900	7.8	3,900	11	2,100	2.1	490	2.6	--	--
OW-02D	12/04/18	7,400	7.8	4,200	2.9	2,100	2.2	490	2.6	--	--
OW-05S	06/06/18	4,900	7.5	3,500	0.78	1,600	1.5	350	3.3	--	--
OW-05S	12/04/18	5,000	7.5	3,100	2.3	1,500	1.4	300	3.0	--	--
OW-05M	06/06/18	7,000	7.8	4,100	0.31	2,100	2.0	480	2.5	81	ND (0.2)
OW-05M	12/04/18	7,400	7.6	4,200	3.8	2,100	2.2	500	2.8	77	ND (0.2)
OW-05D	12/04/18	7,400	7.7	4,200	0.36	2,100	2.3	500	2.4	--	--

Acronyms and Abbreviations:

-- = data not collected or available
µmhos/cm = micro-mhos per centimeter
$CaCO_3$ = calcium carbonate
FD = field duplicate
ID = identification
J = concentration estimated by laboratory or data validation
mg/L = milligrams per liter
ND = parameter not detected at the listed reporting limit
NTU = nephelometric turbidity unit
SM= Standard Method
USEPA = United States Environmental Protection Agency

Table 6
Field Parameters and Manual Water Level Measurements for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Location ID	Sample Date	Specific Conductance (µS/cm)	Temperature (°C)	pH (pH units)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Salinity (%)	Depth to Water (feet btoc)
CW-01M	06/04/18	6,720	29.3	7.5	66	6.71	1	0.43	108.37
CW-01M	12/03/18	7,780	28.8	7.8	150	5.57	9	0.50	109.55
CW-01D	06/04/18	6,430	30.3	7.7	25	4.72	3	0.42	108.40
CW-01D	12/03/18	7,720	26.1	7.7	77	4.97	3	0.50	109.51
CW-02M	06/06/18	6,720	29.9	7.9	-50	6.17	4	0.43	91.91
CW-02M	12/03/18	8,050	29.8	7.7	90	1.94	1	0.52	93.08
CW-02D	06/06/18	6,380	29.7	8.1	71	7.20	3	0.41	91.47
CW-02D	12/03/18	8,150	27.7	7.7	100	3.00	2	0.53	92.54
CW-03M	06/05/18	7,320	31.0	7.7	-51	3.85	4	0.47	76.73
CW-03M	12/03/18	8,720	29.5	7.7	81	3.25	10	0.56	77.95
CW-03D	06/05/18	6,410	31.5	8.1	37	6.10	7	0.41	76.30
CW-03D	12/03/18	8,060	28.5	7.9	88	2.16	1	0.52	77.28
CW-04M	06/05/18	6,700	30.2	7.6	-38	6.93	3	0.43	60.89
CW-04M	12/04/18	8,060	28.1	7.6	75	3.62	3	0.52	61.91
CW-04D	06/05/18	6,380	30.5	7.9	32	7.42	2	0.41	60.73
CW-04D	12/04/18	8,070	29.0	7.6	97	3.01	2	0.52	61.72
OW-01S	12/03/18	7,070	28.8	6.9	85	5.99	4	0.46	93.97
OW-01M	12/03/18	7,640	27.7	7.6	79	6.99	4	0.49	93.81
OW-01D	12/04/18	7,730	22.5	7.9	170	5.37	6	0.50	93.20
OW-02S	12/04/18	3,450	28.7	7.9	61	7.84	5	0.22	92.69
OW-02M	12/03/18	7,700	21.7	7.8	150	6.66	9	0.50	91.90
OW-02D	12/04/18	7,780	23.3	7.8	67	7.16	5	0.50	91.86
OW-05S	06/06/18	5,110	31.1	7.5	-59	3.86	3	0.33	94.26
OW-05S	12/04/18	5,430	28.6	7.5	59	5.56	4	0.35	95.30
OW-05M	06/06/18	6,350	28.6	7.8	67	7.96	3	0.41	93.52
OW-05M	12/04/18	7,840	29.4	7.6	60	8.02	4	0.51	94.41
OW-05D	12/04/18	7,790	27.4	7.7	46	0.84	2	0.50	94.73

Note:
Salinity is calculated using the specific conductance field measurement.

Acronyms and Abbreviations:
% = percent
°C = degrees Celsius
µS/cm = micro-Siemens per centimeter
btoc = below top of casing
ID = identification
mg/L = milligrams per liter
mV = millivolt
NTU = nephelometric turbidity unit
ORP = oxidation reduction potential

Table 7
Treated Water Quality Compared to OW and CW Pre-injection Water Quality
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Location ID	Sample Date	Hexavalent Chromium (µg/L)	Chromium (µg/L)	Fluoride (mg/L)	Dissolved Molybdenum (µg/L)	Nitrate/Nitrite as Nitrogen (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Treated Water	8/29/2005	ND (1.0)	ND (2.1)	1.95	8.3	3.70	450	3,620
Treated Water	4/7/2010	0.29	ND (1.0)	1.82	18.6	2.87	512	4,270
Treated Water	10/6/2015	0.24	ND (1.0)	2.1	21	2.60	480	4,200
Treated Water	9/30/2018	ND (0.2)	ND (1.0)	2.2	21	2.8	490	4,200
OW-01S	7/28/2005	18.7	18.8 J	2.45	15.7	3.20	114	1,320
OW-01S	7/28/2005 (FD)	19.4	23.5 J	2.44	17.2	3.15	114	1,260
OW-01M	7/27/2005	16.3	18.9	2.31	27	1.01	311	3,450 J
OW-01D	7/27/2005	ND (1.0)	ND (1.3)	1.14	46.1	0.321	441	6,170 J
OW-02S	7/28/2005	15.3	14.8	3.79	35.6	3.81	126	1,090
OW-02M	7/28/2005	5.4	5.7	2.19	32.4	0.735	342	4,380
OW-02D	7/28/2005	ND (1.0)	ND (1.2)	0.966	51.2	ND (0.1)	616	9,550
OW-05S	7/28/2005	23.4	25.6	2.30	17.1	3.55	105	1,060
OW-05M	7/28/2005	8.6 J	8.8	2.74	35.4	0.621	417	5,550
OW-05D	7/28/2005	ND (1.0)	ND (1.2)	1.11	57	0.151	480	8,970
CW-01M	9/15/2005	18.1	17.8	2.34	21.6	1.11	318	2,990
CW-01D	9/15/2005	ND (1.0)	1.6	0.951	32.1	0.972	379	6,230
CW-02M	9/15/2005	15.6	15.5	2.30	23.1	0.908	342	3,500
CW-02M	9/15/2005 (FD)	15.8	14.7	2.30	21.1	0.96	341	3,440
CW-02D	9/15/2005	ND (1.0)	1.6	0.982	41.6	0.28	601	8,770
CW-03M	9/16/2005	8.8	8.1	2.57	24.2	0.642	464	4,740
CW-03D	9/16/2005	ND (1.0)	ND (1.0)	1.40	29.2	0.304	672	9,550
CW-04M	9/13/2005	19.2	19	1.50	12.3	1.18	240	3,310
CW-04D	9/13/2005	ND (1.0)	ND (1.0)	1.01	26	0.188	534	7,470

Acronyms and Abbreviations:
µg/L = micrograms per liter
CW = compliance well
FD = field duplicate
J = concentration estimated by laboratory or data validation
ID = identification
mg/L = milligrams per liter
ND = parameter not detected at the listed reporting limit
OW = observation well

Table 8
Treated Water Quality Compared to 2018 Annual Monitoring Event Water Quality
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Location ID	Sample Date	Hexavalent Chromium (µg/L)	Chromium (µg/L)	Fluoride (mg/L)	Dissolved Molybdenum (µg/L)	Nitrate/Nitrite as Nitrogen (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Treated Water	10/04/16	ND (0.2)	ND (1.0)	2.1	22	2.9	460	4,000
Treated Water	10/01/17	ND (0.2)	ND (1.0)	2.6	19	2.7	460	4,100
Treated Water	09/30/18	ND (0.2)	ND (1.0)	2.2	21	2.8	490	4,200
CW-01M	12/03/18	1.4	1.5	2.0	17	2.8	480	4,000
CW-01M	12/03/18 (FD)	1.3	1.3	2.1	16	2.9	480	4,100
CW-01D	12/03/18	0.29	ND (1.0)	2.2	20	2.5	480	3,900
CW-02M	12/03/18	0.96	1.3	2.8	15	2.8	480	3,900
CW-02D	12/03/18	ND (0.2)	ND (1.0)	1.8	12	2.9	480	3,900
CW-03M	12/03/18	3.9	4.8	3.5	30	2.3	510	4,100
CW-03D	12/03/18	ND (0.2)	1.1	2.3	14	2.7	480	4,000
CW-04M	12/04/18	1.3	2.0	2.0	11	2.7	490	4,200
CW-04M	12/04/18 (FD)	1.3	1.9	2.0	10	2.8	490	4,100
CW-04D	12/04/18	0.31	ND (1.0)	2.8	20	2.8	480	4,200
OW-01S	12/03/18	4.1	4.6	0.94	4.0	2.8	430	3,900
OW-01M	12/03/18	0.78	1.2	2.3	23	2.8	480	3,800
OW-01D	12/04/18	0.54	ND (1.0)	2.2	21	2.5	490	4,100
OW-02S	12/04/18	15	17	3.1	27	3.0	140	1,900
OW-02M	12/03/18	0.96	2.1	2.1	22	2.6	490	3,900
OW-02D	12/04/18	ND (0.2)	1.1	2.2	21	2.6	490	4,200
OW-05S	12/04/18	12	12	1.4	9.8	3.0	300	3,100
OW-05M	12/04/18	0.22	ND (1.0)	2.2	22	2.8	500	4,200
OW-05D	12/04/18	ND (0.2)	ND (1.0)	2.3	22	2.4	500	4,200

Acronyms and Abbreviations:
µg/L = micrograms per liter
FD = field duplicate
ID = identification
mg/L = milligrams per liter
ND = parameter not detected at the listed reporting limit

ARCADIS Design & Consultancy for natural and built assets

Table 9
Injection Rates and Volumes
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
August-05	58.8	2,626,360	2,626,360	IW-02
September-05	67.2	2,904,094	5,530,454	IW-02
October-05	80.6	3,597,275	9,127,729	IW-02
November-05	74.5	3,216,979	12,344,708	IW-02
December-05	103.5	4,622,252	16,966,960	IW-02
January-06	113.5	5,067,560	22,034,520	IW-02
February-06	121.4	4,896,522	26,931,042	IW-02
March-06	121.1	5,405,223	32,336,265	IW-02
April-06	116.7	5,039,655	37,375,920	IW-02
May-06	118.9	5,305,831	42,681,751	IW-02
June-06	116.9	5,050,593	47,732,344	IW-02
July-06	119.2	5,322,857	53,055,201	IW-02
August-06	121.6	5,429,628	58,484,829	IW-03
September-06	121	5,229,047	63,713,876	IW-03
October-06	122.6	5,473,384	69,187,260	IW-03
November-06	122.1	5,275,516	74,462,776	IW-03
December-06	124.1	5,542,012	80,004,788	IW-03
January-07	123.5	5,510,915	85,515,703	IW-03
February-07	126	5,079,402	90,595,105	IW-03
March-07	123.8	5,525,669	96,120,774	IW-02
April-07	96.5	4,169,396	100,290,170	IW-03
May-07	126.8	5,658,656	105,948,826	IW-03
June-07	127.3	5,499,332	111,448,158	IW-03
July-07	122.1	5,448,764	116,896,922	IW-02
August-07	125.8	5,614,418	122,511,340	IW-03
September-07	128.1	5,531,784	128,043,124	IW-03
October-07	128.1	5,717,776	133,760,900	IW-03
November-07	124.1	5,361,317	139,122,217	IW-03
December-07	124.6	5,560,689	144,682,906	IW-03

Table 9
Injection Rates and Volumes
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
January-08	123.1	5,492,958	150,175,864	IW-03
February-08	126.5	5,283,674	155,459,538	IW-03
March-08	124.3	5,550,583	161,010,121	IW-03
April-08	93.5	4,040,973	165,051,094	IW-03
May-08	124.2	5,542,847	170,593,941	IW-03
June-08	128.6	5,553,857	176,147,798	IW-03
July-08	127.4	5,685,501	181,833,299	IW-03
August-08	127.7	5,702,022	187,535,321	IW-02
September-08	120.2	5,193,691	192,729,012	IW-03
October-08	125.7	5,613,447	198,342,459	IW-02
November-08	128.4	5,548,109	203,890,568	IW-03
December-08	124.2	5,542,252	209,432,820	IW-03
January-09	123.6	5,517,257	214,950,079	IW-03
February-09	131.5	5,303,429	220,253,508	IW-03
March-09	125.9	5,618,103	225,871,612	IW-03
April-09	101.2	4,372,758	230,244,370	IW-03
May-09	122.8	5,482,349	235,726,719	IW-03
June-09	125.5	5,420,397	241,147,116	IW-02
July-09	83.4	3,725,059	244,872,175	IW-03
August-09	127.3	5,680,943	250,553,118	IW-03
September-09	93.7	4,046,699	254,599,817	IW-02
October-09	131.1	5,853,536	260,453,352	IW-02
November-09	130.5	5,639,433	266,092,786	IW-02
December-09	120.5	5,377,155	271,469,941	IW-03
January-10	126.3	5,637,472	277,107,412	IW-03
February-10	124.8	5,031,840	282,139,252	IW-03
March-10	126.0	5,625,524	287,764,777	IW-03
April-10	112.0	4,839,690	292,604,467	IW-03
May-10	131.8	5,882,290	298,486,757	IW-03
June-10	123.9	5,354,115	303,840,872	IW-03

Table 9
Injection Rates and Volumes
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Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
July-10	120.8	5,390,898	309,231,770	IW-02
August-10	118.8	5,302,122	314,533,892	IW-03
September-10	131.2	5,667,255	320,201,147	IW-03
October-10	126.8	5,658,794	325,859,940	IW-02
November-10	130.3	5,629,913	331,489,853	IW-02
December-10	129.4	5,774,967	337,264,820	IW-03
January-11	126.5	5,647,947	342,912,767	IW-03
February-11	129.2	5,208,707	348,121,474	IW-02
March-11	128.8	5,747,411	353,868,885	IW-03
April-11	113.5	4,903,434	358,772,319	IW-02
May-11	130.5	5,825,578	364,597,897	IW-02
June-11	121.2	5,236,904	369,834,802	IW-02
July-11	125.0	5,580,178	375,414,979	IW-02
August-11	114.7	5,120,270	380,535,249	IW-03
September-11	130.0	5,614,683	386,149,933	IW-03
October-11	128.8	5,748,120	391,898,052	IW-03
November-11	129.7	5,603,492	397,501,544	IW-02
December-11	129.6	5,784,322	403,285,866	IW-02
January-12	130.8	5,837,548	409,123,414	IW-03
February-12	130.1	5,432,832	414,556,246	IW-02
March-12	128.8	5,747,601	420,303,847	IW-02
April-12	115.2	4,975,734	425,279,582	IW-03
May-12	133.3	5,951,440	431,231,022	IW-03
June-12	134.2	5,795,380	437,026,402	IW-03
July-12	133.4	5,954,462	442,980,863	IW-03
August-12	114.0	5,091,104	448,071,968	IW-02
September-12	130.9	5,654,269	453,726,237	IW-02
October-12	132.1	5,896,425	459,622,662	IW-03
November-12	131.6	5,686,609	465,309,270	IW-03
December-12	130.9	5,841,981	471,151,251	IW-03

Table 9
Injection Rates and Volumes
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Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
January-13	131.2	5,855,164	477,006,415	IW-03
February-13	130.9	5,279,234	482,285,649	IW-03
March-13	134.5	6,005,382	488,291,032	IW-03
April-13	117.4	5,073,222	493,364,254	IW-02
May-13	134.2	5,989,613	499,353,867	IW-02
June-13	128.0	5,528,925	504,882,792	IW-03
July-13	128.9	5,755,955	510,638,747	IW-03
August-13	114.3	5,101,661	515,740,408	IW-03
September-13	131.9	5,697,317	521,437,725	IW-03
October-13	135.1	6,031,939	527,469,664	IW-03
November-13	129.6	5,597,036	533,066,700	IW-03
December-13	133.9	5,977,834	539,044,534	IW-02
January-14	133.1	5,943,725	544,988,259	IW-02
February-14	132.1	5,327,968	550,316,227	IW-02
March-14	130.6	5,828,858	556,145,086	IW-02
April-14	115.7	4,997,542	561,142,628	IW-02
May-14	133.9	5,978,013	567,120,640	IW-03
June-14	122.3	5,282,957	572,403,598	IW-03
July-14	129.1	5,765,249	578,168,847	IW-02
August-14	116.0	5,177,316	583,346,163	IW-02
September-14	131.8	5,693,165	589,039,328	IW-02
October-14	133.9	5,978,467	595,017,795	IW-02
November-14	131.0	5,659,761	600,677,556	IW-02
December-14	132.2	5,902,346	606,579,902	IW-02
January-15	129.6	5,787,130	612,367,032	IW-03
February-15	128.2	5,351,970	617,719,002	IW-03
March-15	129.4	5,778,510	623,497,512	IW-02
April-15	116.4	5,029,977	628,527,489	IW-02
May-15	118.7	5,296,731	633,824,220	IW-03
June-15	132.9	5,740,117	639,564,338	IW-03

Table 9
Injection Rates and Volumes
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Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
July-15	128.7	5,746,980	645,311,317	IW-03
August-15	112.5	5,021,214	650,332,532	IW-02
September-15	133.1	5,751,891	656,084,423	IW-02
October-15	133.7	5,967,913	662,052,336	IW-02
November-15	134.0	5,790,514	667,842,850	IW-02
December-15	133.6	5,963,422	673,806,272	IW-02
January-16	134.7	6,013,515	679,819,786	IW-02
February-16	126.9	5,482,797	685,302,583	IW-02
March-16	126.3	5,638,278	690,940,861	IW-03
April-16	96.7	4,177,595	695,118,456	IW-03
May-16	133.6	5,962,540	701,080,996	IW-03
June-16	131.7	5,688,462	706,769,458	IW-03
July-16	133.7	5,967,525	712,736,983	IW-03
August-16	114.9	5,127,532	717,864,515	IW-02
September-16	134.9	5,827,182	723,691,697	IW-02
October-16	133.3	5,948,951	729,640,648	IW-02
November-16	131.8	5,693,070	735,333,719	IW-02
December-16	137.1	6,119,549	741,453,268	IW-02
January-17	135.1	6,031,081	747,484,349	IW-02
February-17	136.5	5,504,323	752,988,672	IW-02
March-17	136.6	6,096,222	759,084,893	IW-02
April-17	115.0	4,969,552	764,054,445	IW-03
May-17	132.1	5,897,639	769,952,084	IW-03
June-17	128.9	5,569,430	775,521,515	IW-03
July-17	131.4	5,864,163	781,385,677	IW-03
August-17	118.8	5,303,296	786,688,973	IW-03
September-17	128.6	5,553,687	792,242,660	IW-02
October-17	127.5	5,692,934	797,935,595	IW-02
November-17	130.6	5,643,963	803,579,558	IW-02
December-17	131.5	5,871,334	809,450,892	IW-03

Table 9
Injection Rates and Volumes
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Month and Year	Average Injection Rate (gpm)	Monthly Total (gallons)	Cumulative Total (gallons)	Primary Injection Well in Service
January-18	133.8	5,972,906	815,423,798	IW-03
February-18	131.1	5,286,197	820,709,995	IW-03
March-18	129.9	5,796,824	826,506,819	IW-02
April-18	110.9	4,792,588	831,299,407	IW-02
May-18	130.0	5,801,344	837,100,751	IW-03
June-18	119.5	5,163,189	842,263,940	IW-03
July-18	117.6	5,250,583	847,514,523	IW-03
August-18	108.9	4,861,644	852,376,167	IW-03
September-18	134.1	5,792,419	858,168,586	IW-03
October-18	132.0	5,893,070	864,061,655	IW-03
November-18	133.0	5,744,825	869,806,481	IW-03
December-18	132.9	5,932,553	875,739,033	IW-03

Note:
The injection flow rate is measured by flow meters mounted in the piping leading into IW-02 and IW 03. Data are logged in the Interim Measures No. 3 control system, from which this information is reported.

Acronym and Abbreviation:
gpm = gallons per minute

Table 10
Manual Water Level Measurements and Elevations, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

ARCADIS Design & Consultancy for natural and built assets

Location ID	Well Depth (feet btoc)	Measuring Point Elevation (feet amsl)	Monitoring Date and Time		Water Level Measurement (feet btoc)	Salinity (%)	Groundwater/Water Elevation Adjusted for Salinity and Temperature (feet amsl)
CW-01M	190.0	566.07	2/23/2018	8:00	110.25	0.52	455.83
			5/3/2018	9:43	108.98	0.52	457.10
			9/5/2018	7:05	114.21	0.52	451.87
			12/3/2018	12:50	109.44	0.52	456.64
CW-01D	300.2	566.46	2/23/2018	7:57	110.23	0.51	456.23
			5/3/2018	9:45	109.04	0.51	457.42
			9/5/2018	7:03	114.25	0.51	452.21
			12/3/2018	12:48	109.51	0.51	456.95
CW-02M	208.3	549.45	2/23/2018	7:47	93.77	0.54	455.67
			5/3/2018	9:49	92.31	0.54	457.13
			9/5/2018	7:39	92.72	0.54	456.72
			12/3/2018	14:12	93.08	0.54	456.33
CW-02D	355.0	549.43	2/23/2018	7:45	93.39	0.53	456.02
			5/3/2018	9:51	91.95	0.53	457.46
			9/5/2018	7:37	92.22	0.53	457.19
			12/3/2018	14:10	92.58	0.53	456.83
CW-03M	222.0	534.10	2/23/2018	7:53	78.70	0.60	455.43
			5/3/2018	9:54	77.14	0.60	456.99
			9/5/2018	7:42	77.55	0.60	456.58
			12/3/2018	14:15	78.05	0.60	456.08
CW-03D	340.0	534.14	2/23/2018	7:50	77.99	0.54	456.08
			5/3/2018	9:56	76.57	0.54	457.50
			9/5/2018	7:44	76.84	0.54	457.23
			12/3/2018	14:13	77.40	0.54	456.75
CW-04M	169.8	518.55	2/23/2018	8:28	62.63	0.54	455.92
			5/3/2018	9:02	61.33	0.54	457.22
			9/5/2018	7:57	61.51	0.54	457.04
			12/3/2018	14:04	62.00	0.54	456.57
CW-04D	303.0	518.55	2/23/2018	8:25	62.44	0.55	456.09
			5/3/2018	9:05	61.17	0.55	457.36
			9/5/2018	7:59	61.22	0.55	457.31
			12/3/2018	14:02	61.75	0.55	456.79
OW-01S	113.5	550.21	2/23/2018	8:25	94.79	0.46	455.41
			5/3/2018	9:35	93.20	0.45	457.00
			9/5/2018	7:28	93.60	0.47	456.60
			12/3/2018	13:00	94.03	0.47	456.17
OW-01M	185.8	550.36	2/23/2018	8:22	94.52	0.51	455.87
			5/3/2018	9:38	93.07	0.51	457.32
			9/5/2018	7:30	93.47	0.51	456.92
			12/3/2018	13:05	93.92	0.51	456.45
OW-01D	277.3	550.36	2/23/2018	8:20	94.20	0.51	456.23
			5/3/2018	9:39	92.49	0.51	457.94
			9/5/2018	7:32	92.01	0.51	458.42
			12/3/2018	13:07	93.50	0.51	457.12
OW-02S	103.6	548.88	2/23/2018	8:17	93.43	0.21	455.42
			5/3/2018	9:30	91.82	0.22	457.03
			9/5/2018	7:23	92.23	0.21	456.62
			12/3/2018	13:15	92.70	0.25	456.16
OW-02M	210.3	548.52	2/23/2018	8:15	92.60	0.52	455.94
			5/3/2018	9:32	91.07	0.52	457.47
			9/5/2018	7:25	91.60	0.52	456.94
			12/3/2018	13:12	92.08	0.52	456.64

Table 10
Manual Water Level Measurements and Elevations, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Location ID	Well Depth (feet btoc)	Measuring Point Elevation (feet amsl)	Monitoring Date and Time		Water Level Measurement (feet btoc)	Salinity (%)	Groundwater/Water Elevation Adjusted for Salinity and Temperature (feet amsl)
OW-02D	340.0	549.01	2/23/2018	8:12	92.51	0.53	456.54
			5/3/2018	9:33	90.72	0.53	458.33
			9/5/2018	7:21	91.38	0.53	457.67
			12/3/2018	13:14	91.08	0.53	458.27
OW-05S	110.3	551.83	2/23/2018	8:09	96.14	0.35	455.67
			5/3/2018	9:22	94.72	0.40	457.09
			9/5/2018	7:09	95.22	0.36	456.59
			12/3/2018	13:23	95.51	0.41	456.31
OW-05M	250.3	551.81	2/23/2018	8:07	95.12	0.45	456.58
			5/3/2018	9:25	94.20	0.47	457.53
			9/5/2018	7:11	94.15	0.49	457.59
			12/3/2018	13:28	94.40	0.53	457.37
OW-05D	350.0	552.41	2/23/2018	8:05	95.51	0.46	456.72
			5/3/2018	9:28	94.77	0.49	457.50
			9/5/2018	7:13	94.32	0.50	457.97
			12/3/2018	13:36	94.91	0.53	457.58

Note:
Salinity and temperature data were used to adjust water levels to freshwater equivalents.

Acronyms and Abbreviations:
% = percent
amsl = above mean sea level
btoc = below top of casing
ID = identification

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Table 11
Vertical Gradients within the OW and CW Clusters, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Well Pairs	Vertical Gradient[(a)] (foot/foot)
CW-01D to CW-01M	0.0029
CW-02D to CW-02M	0.0038
CW-03D to CW-03M	0.0069
CW-04D to CW-04M	0.0020
OW-01M to OW-01S	0.0036
OW-01D to OW-01M	0.0072
OW-02M to OW-02S	0.0042
OW-02D to OW-02M	0.0135
OW-05M to OW-05S	0.0076
OW-05D to OW-05M	0.0026

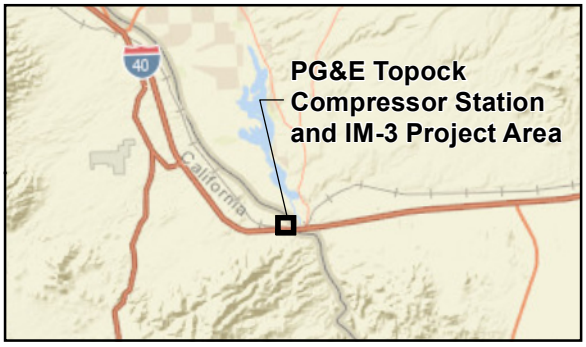
Notes:
Gradients were calculated using December 3, 2018 groundwater elevation data.
[(a)] Positive value signifies an upward gradient.

Acronyms and Abbreviations:
CW = compliance well
OW = observation well

FIGURES



VICINITY MAP



LEGEND

- Existing IM-3 Extraction Well
- Existing IM-3 Injection Well
- Influent Treatment Facility Pipeline (below ground)
- Effluent Treatment Facility Pipeline (above ground)
- Property Line

N

0 250 500
Feet

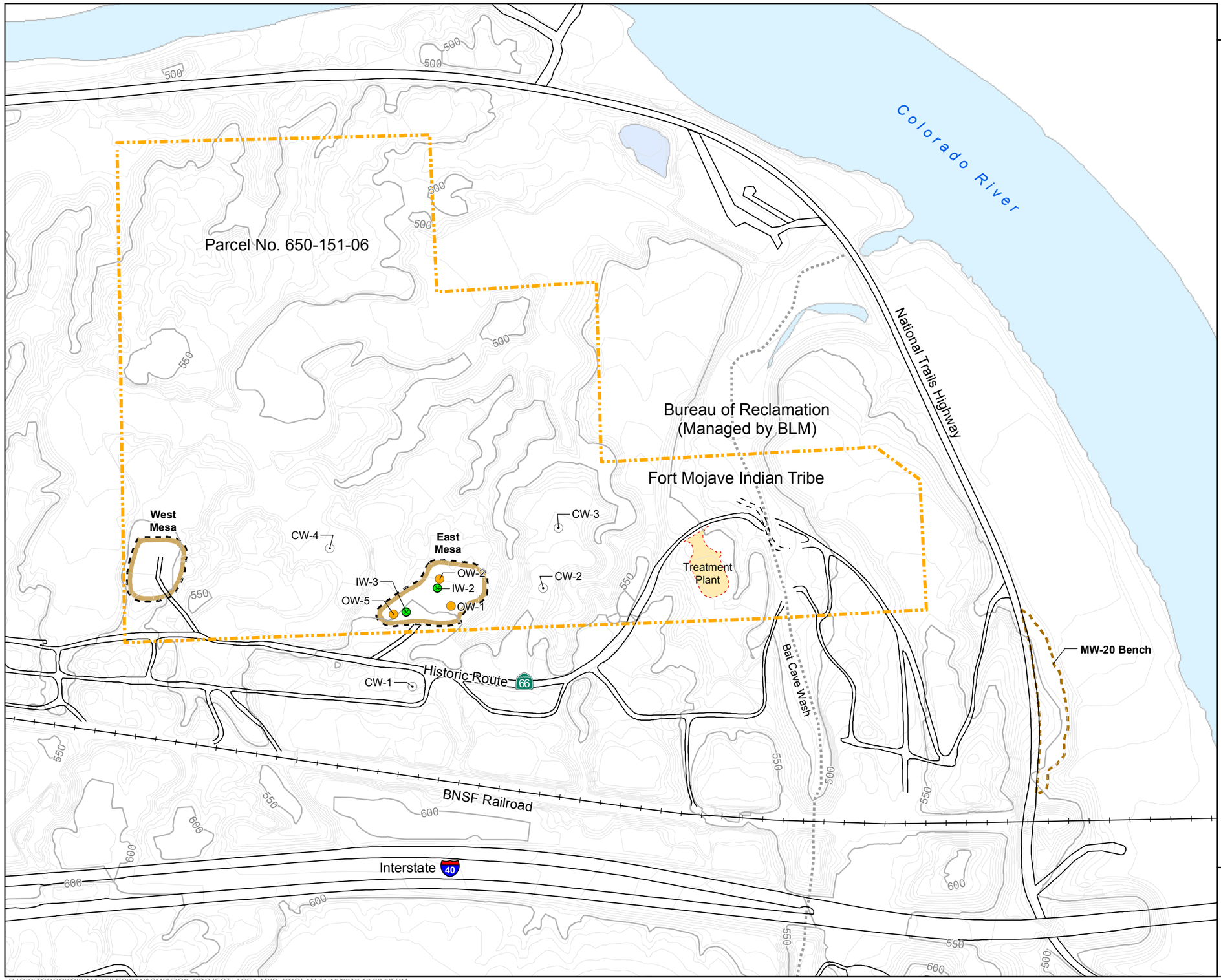
Notes:
Location map shows IM-3 facilities as of of January 2006.
Aerial photography taken November 2011.

BLM = Bureau of Land Management
IM-3 = Interim Measures No. 3
PG&E = Pacific Gas and Electric Company

FIGURE 1
SITE LOCATION AND INTERIM MEASURES NO. 3 TREATMENT SYSTEM

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



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LEGEND

- IM-3 Injection Well
- Observation Well Cluster
- Compliance Well Cluster
- Property Line
- Contingency Area

Notes:
IM-3 = Interim Measures No. 3
BLM = Bureau of Land Management
PG&E = Pacific Gas and Electric Company

N

0 200 400
Feet

FIGURE 2
MONITORING LOCATIONS FOR CMP AND INJECTION WELL FIELD

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

Created by: CRITIGEN

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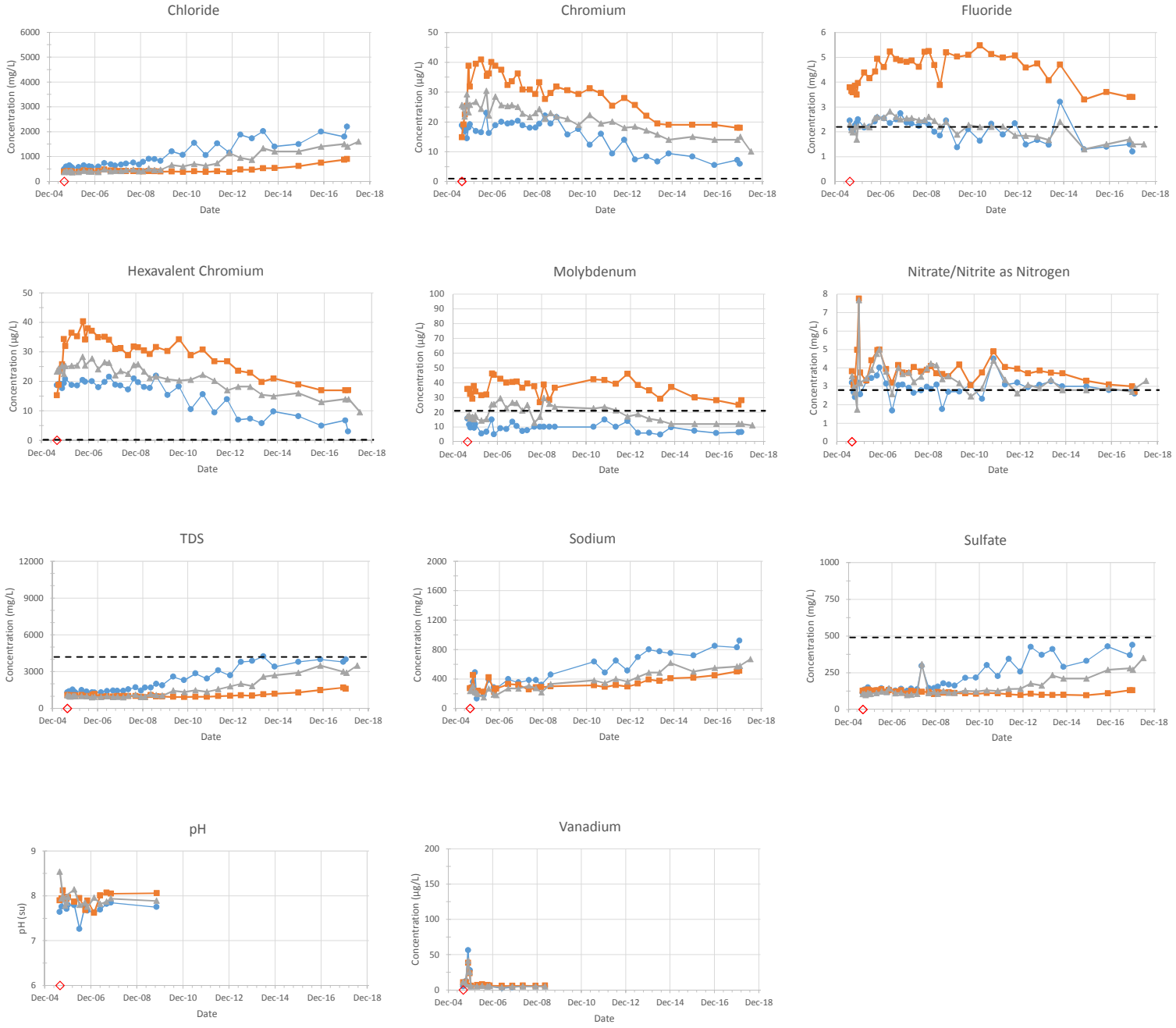

LEGEND

- OW-1S
- OW-2S
- OW-5S
- System Start-up
- Treated Water

Notes:

1. µg/L = micrograms per liter
2. mg/L = milligrams per liter
3. TDS = total dissolved solids

Treated water only on select analytes.

FIGURE 3A
OW-1S, OW-2S, OW-5S CONCENTRATION VERSUS TIME PLOTS

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

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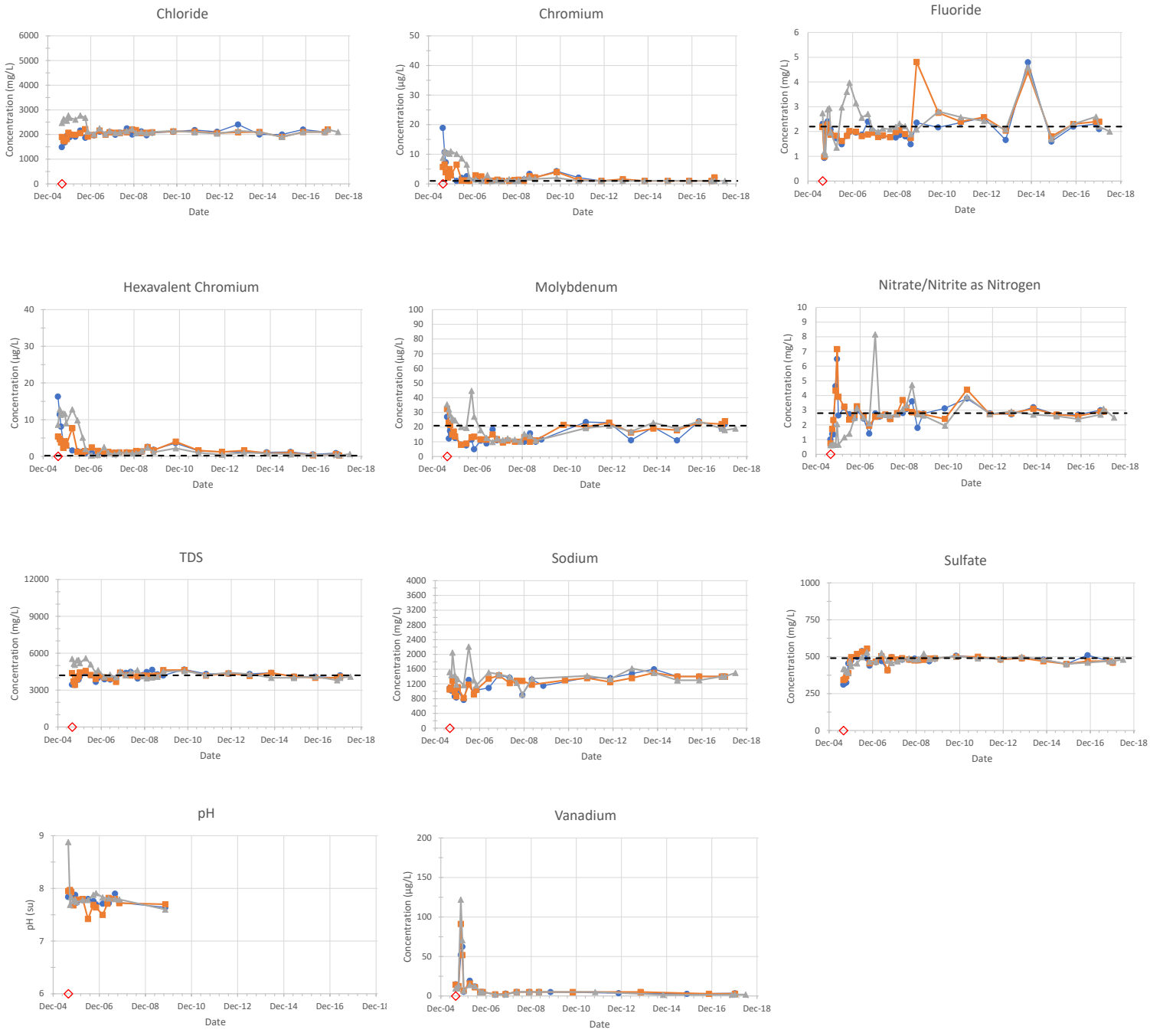

LEGEND

- OW-1M
- OW-2M
- OW-5M
- System Start-up
- Treated Water

Notes:

1. µg/L = micrograms per liter
2. mg/L = milligrams per liter
3. TDS = total dissolved solids

Treated water only on select analytes.

FIGURE 3B
OW-1M, OW-2M, OW-5M CONCENTRATION VERSUS TIME PLOTS

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

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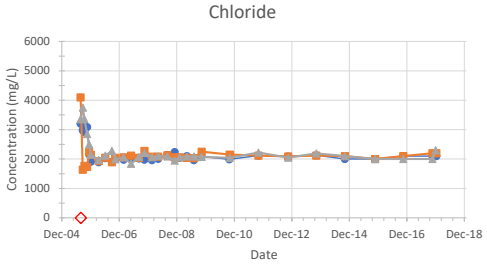

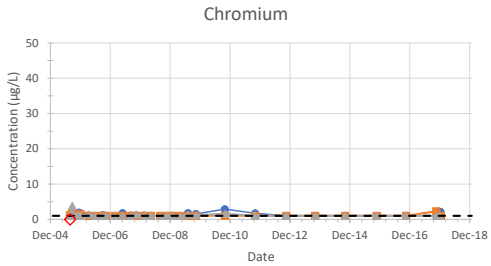

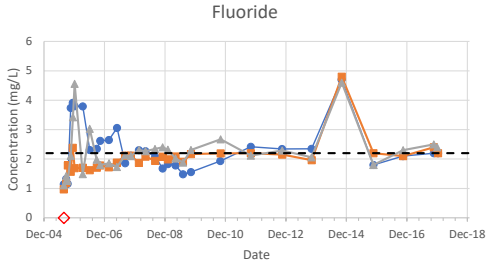

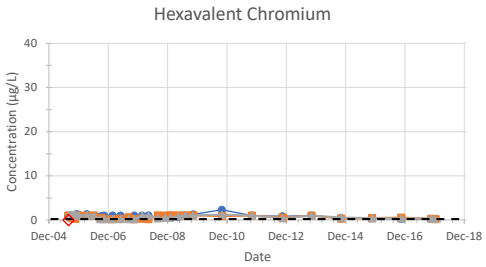

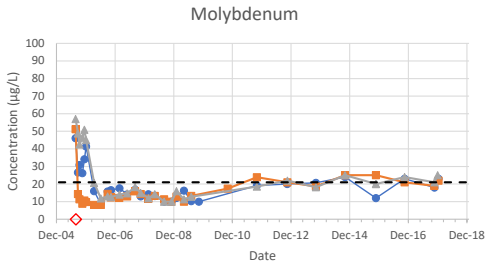

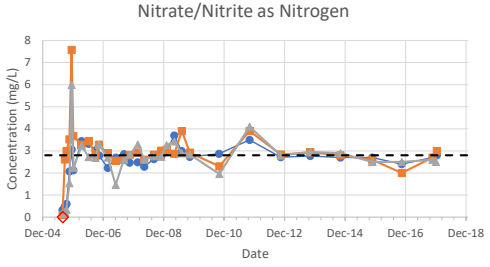

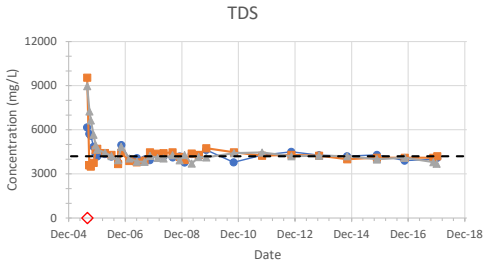

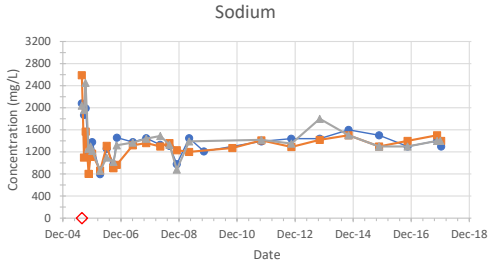

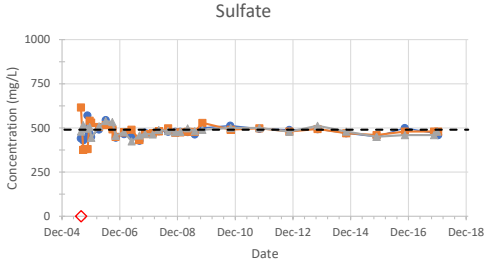

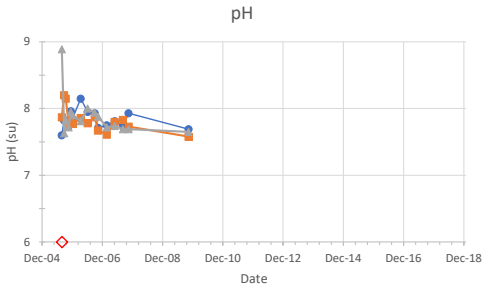

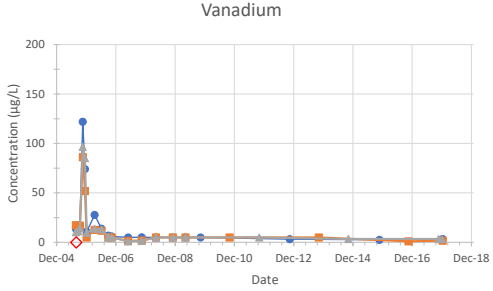

LEGEND

- OW-1D
- OW-2D
- OW-5D
- System Start-up
- Treated Water

Notes:

1. µg/L = micrograms per liter
2. mg/L = milligrams per liter
3. TDS = total dissolved solids

Treated water only on select analytes.

FIGURE 3C
OW-1D, OW-2D, OW-5D CONCENTRATION VERSUS TIME PLOTS

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

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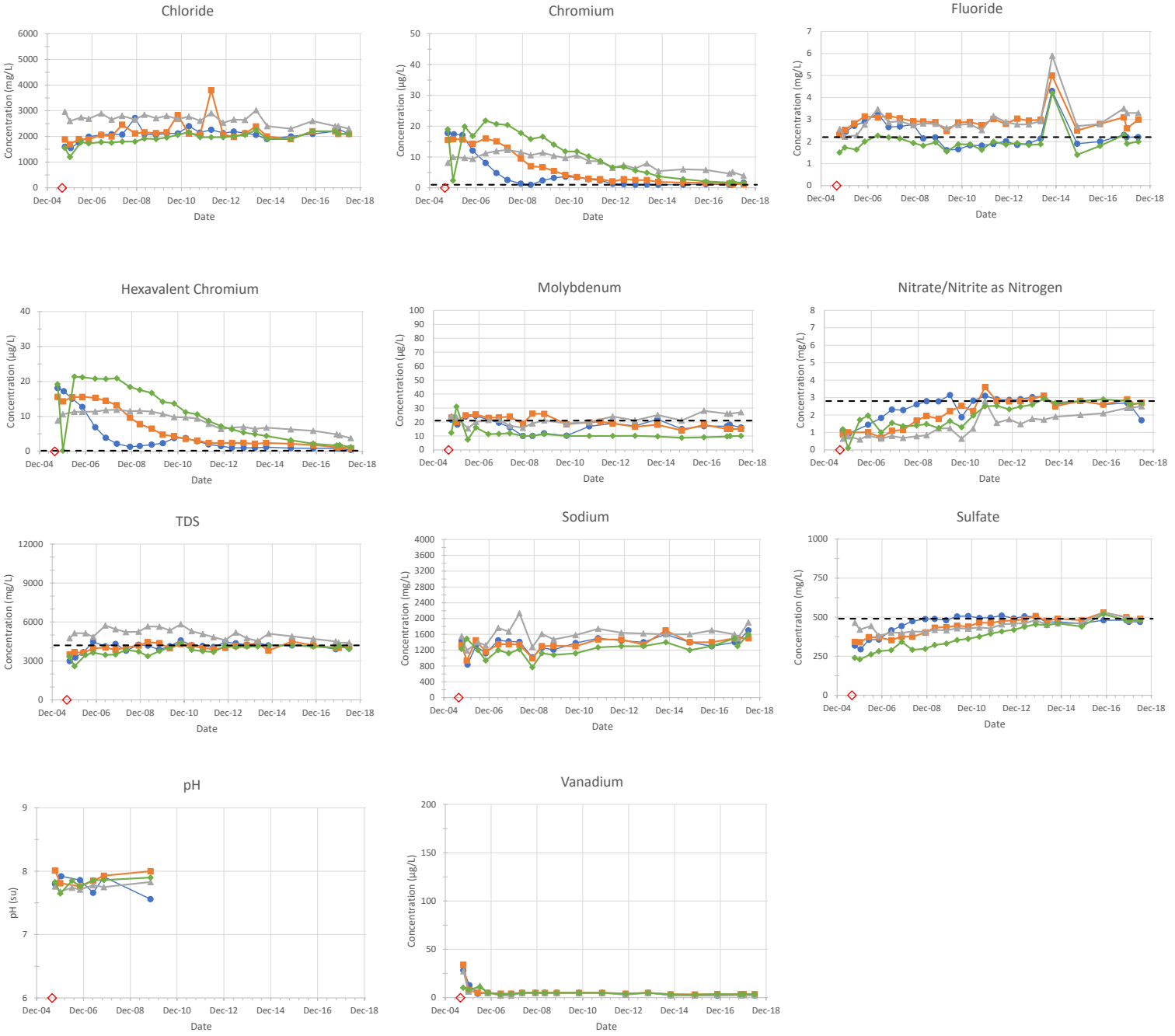

LEGEND

- CW-1M
- CW-2M
- CW-3M
- CW-4M
- System Start-up
- Treated Water

Notes:

1. µg/L = micrograms per liter
2. mg/L = milligrams per liter
3. TDS = total dissolved solids

Treated water only on select analytes.

FIGURE 3D
CW-1M, CW-2M, CW-3M, CM-4M CONCENTRATION VERSUS TIME PLOTS

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

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LEGEND

- CW-1D
- CW-2D
- CW-3D
- CW-4D
- System Start-up
- Treated Water

Notes:

1. µg/L = micrograms per liter
2. mg/L = milligrams per liter
3. TDS = total dissolved solids

Treated water only on select analytes.

FIGURE 3E
CW-1D, CW-2D, CW-3D, CM-4D CONCENTRATION VERSUS TIME PLOTS

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

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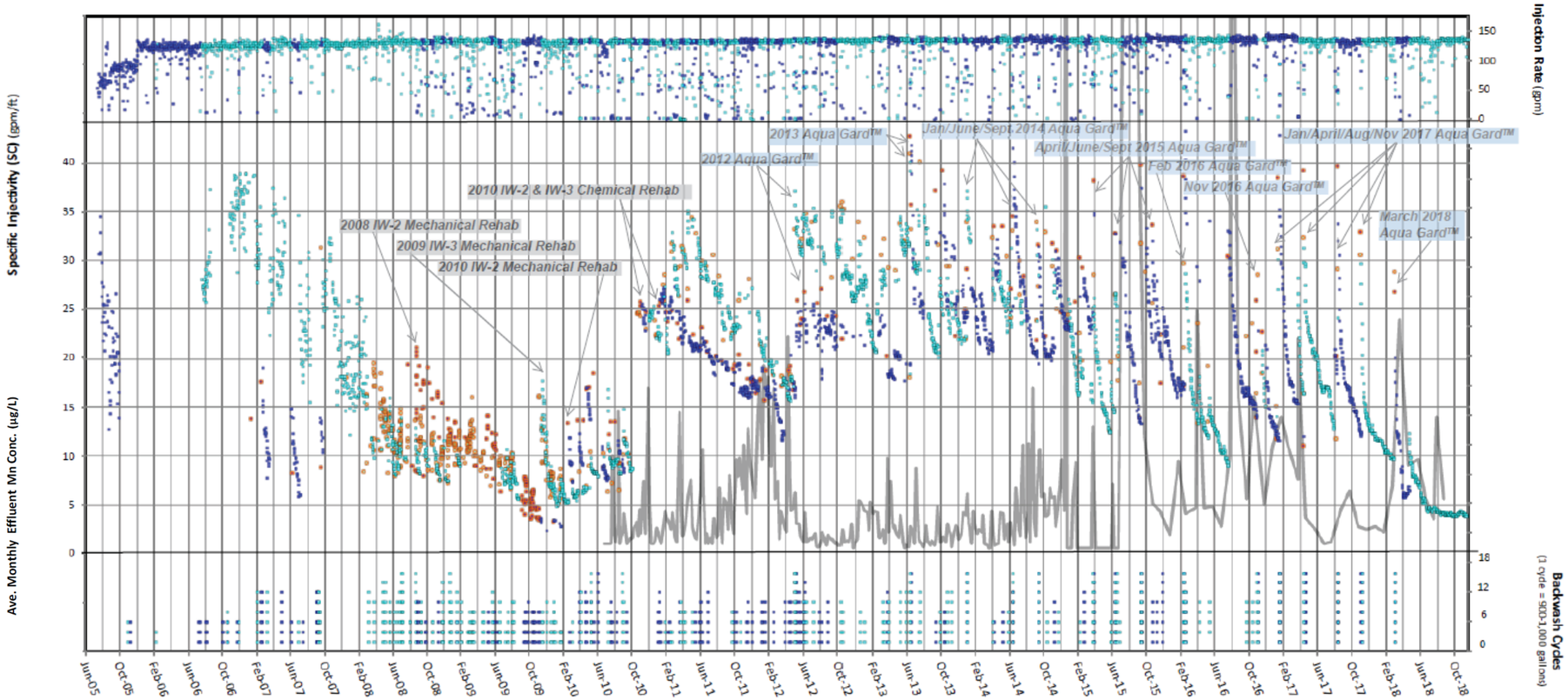

LEGEND

- IW-02 Injectivity Manual
- IW-02 Injectivity Instrument
- IW-02 Backwash Cycle
- Effluent Mn Conc
- IW-03 Injection Rate
- IW-03 Injectivity Manual
- IW-03 Injectivity Instrument
- IW-03 Backwash Cycle
- IW-02 Injection Rate

Notes:
µg/L = micrograms per liter
ave. = average
conc. = concentration
gpm = gallons per minute gpm/ft = gallons per minute per foot Mn = manganese

1. Manual - An instantaneous manual measurement of flow and water level to calculate injectivity.
2. Instrument - Calculated daily average injectivity using on-line minute level and flow readings.
3. Backwash Cycle - One backwash cycle constitutes one load (900 to 1,000 gallons) of backwash purge water.
4. Injection Rate - Daily average of on-line minute flow readings.
5. Blue boxes reference Aqua Gard™ events (month and year), where both wells were completed.

FIGURE 4
IM-3 OPERATION DATA INJECTION WELL PERFORMANCE - AUGUST 2005 TO DECEMBER 2018

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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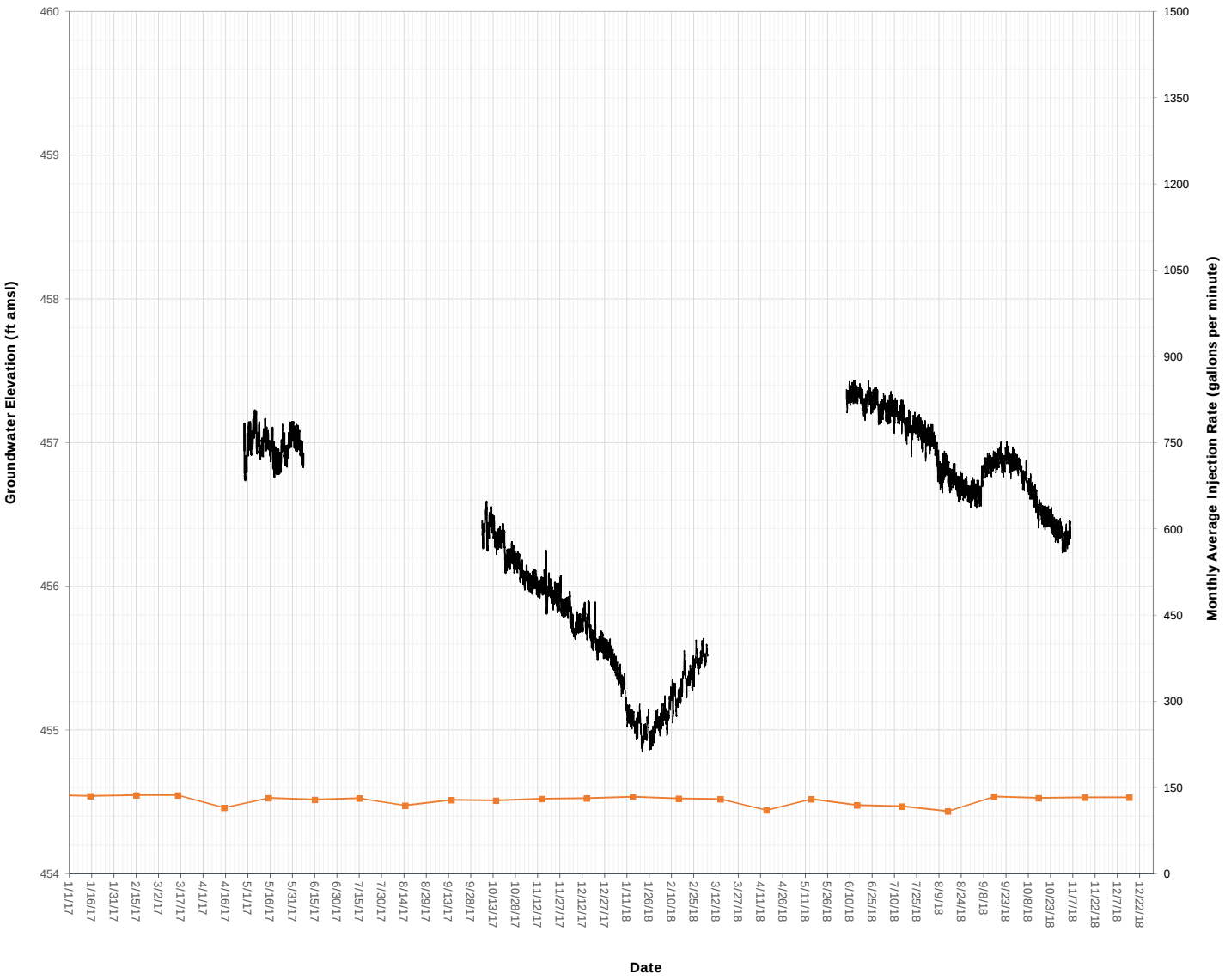


LEGEND

OW-01S

Monthly Average Injection Rate

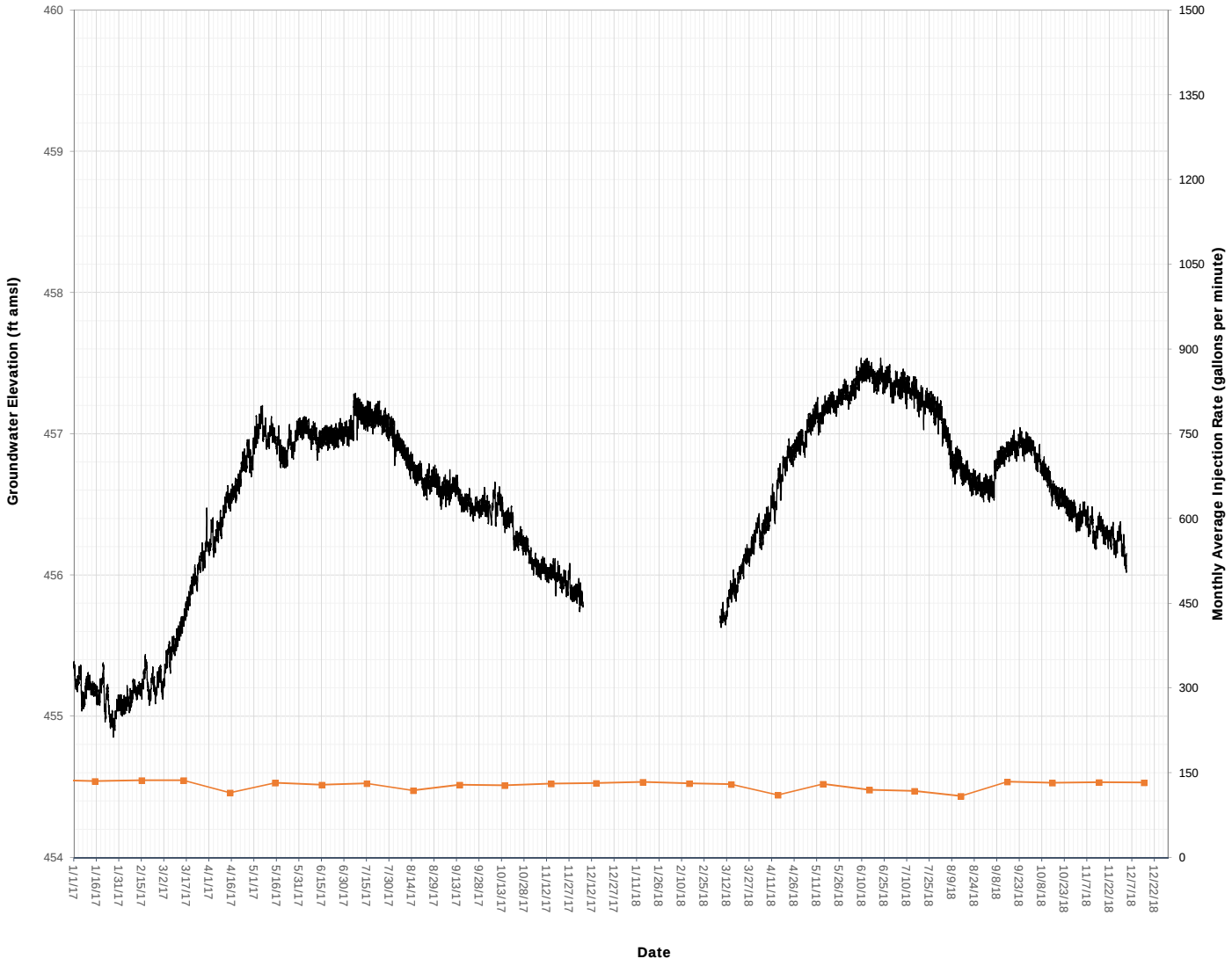
Notes:
ft amsl = feet above mean sea level
IW = injection well

See Tables 1 and 9 for primary injection wells in service during the biennial reporting period. Data are unavailable between January 1 and April 27, 2017; between June 8 and October 4, 2017; between March 7 and June 6, 2018; and between November 6 and December 3, 2018 due to transducer malfunction/ failure.

FIGURE 5A
OW-1 HYDROGRAPH AND IW INJECTION RATE

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

ARCADIS



LEGEND

OW-02S

Monthly Average Injection Rate

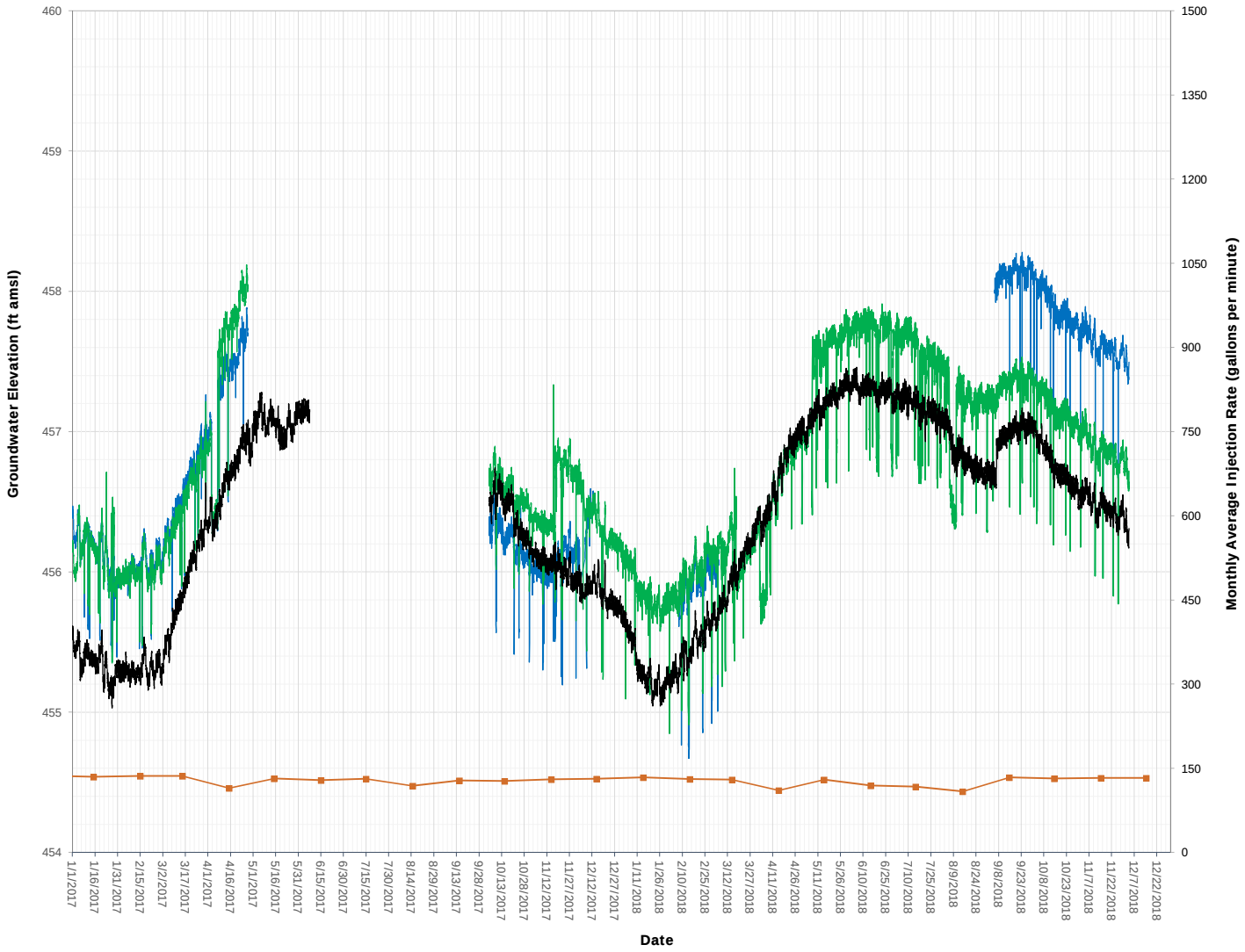
Notes:
ft amsl = feet above mean sea level
IW = injection well

See Tables 1 and 9 for primary injection wells in service during the biennial reporting period. Data are unavailable between December 7, 2017 and March 6, 2018 due to transducer malfunction or failure.

FIGURE 5B
OW-2 HYDROGRAPH AND IW INJECTION RATE

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

ARCADIS



LEGEND

- OW-05D
- OW-05M
- OW-05S
- Monthly Average Injection Rate

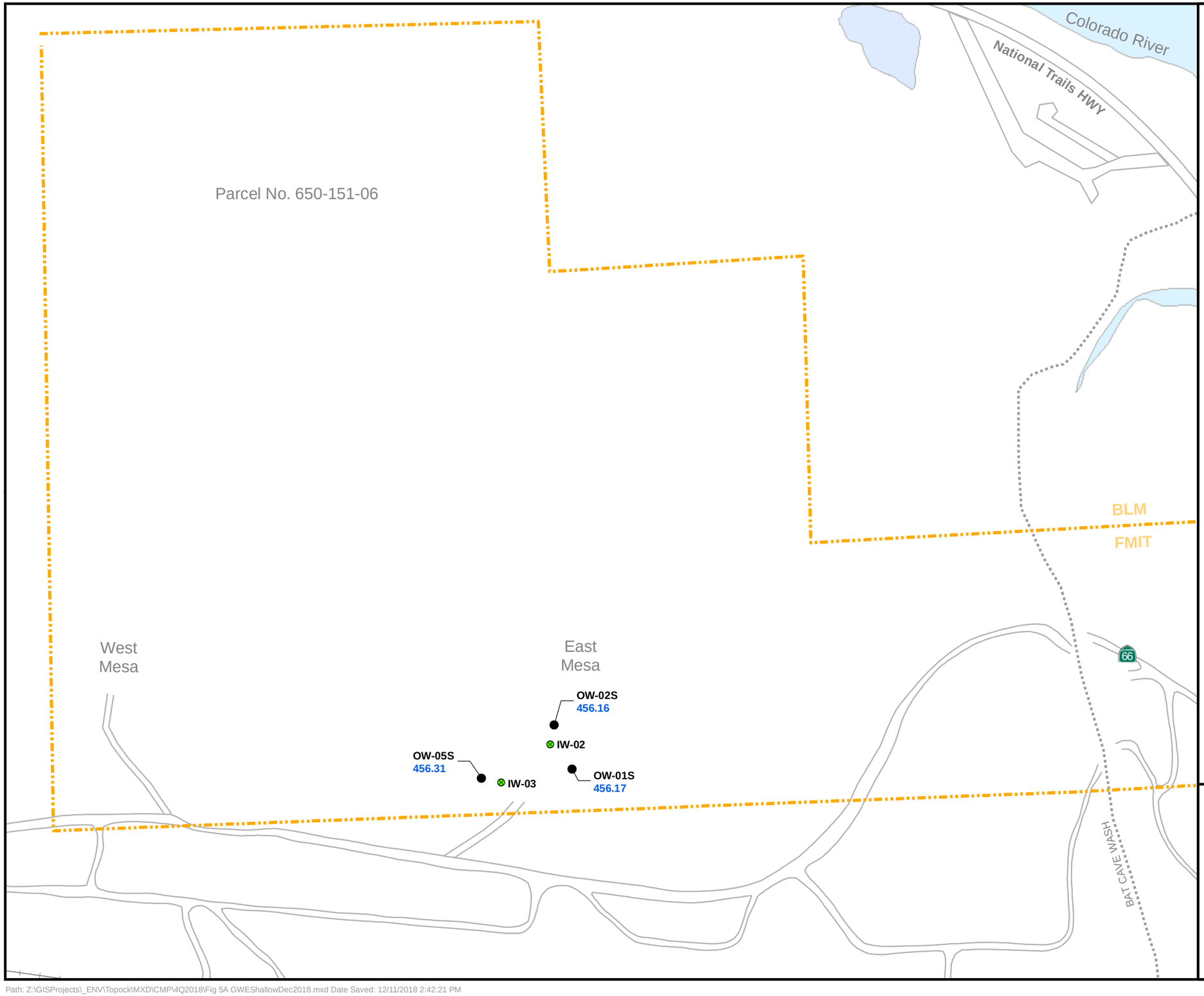
Notes:
ft amsl = feet above mean sea level
IW = injection well

See Tables 1 and 9 for primary injection wells in service during the biennial reporting period.Data are unavailable for OW-05S between June 8 and October 3, 2017 due to transducer malfunction or failure. Data are unavailable for OW-05M between April 28 and October 3, 2017 due to transducer malfunction or failure. Data are unavailable for OW-05D between April 28 and October 3, 2017; between December 5 and 6, 2017; between December 13, 2017 and February 6, 2018; and between March 7 and September 4, 2018 due to transducer malfunction or failure.

FIGURE 5C
OW-5 HYDROGRAPHS AND IW INJECTION RATE

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSION STATION, NEEDLES, CALIFORNIA

ARCADIS



LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well
- Property Line

OW-05S Salinity- and temperature-adjusted
456.31 groundwater head elevation in feet above mean sea level

Notes:
BLM = Bureau of Land Management
FMIT = Fort Mojave Indian Tribe

Data posted from December 3, 2018 manual water level measurement.

N

0 250 500 Feet

1 inch = 250 feet

California State Plane North American Datum of 1983, Zone 5 U.S. Feet

FIGURE 6A
GROUNDWATER ELEVATIONS FOR SHALLOW WELLS, DECEMBER 3, 2018

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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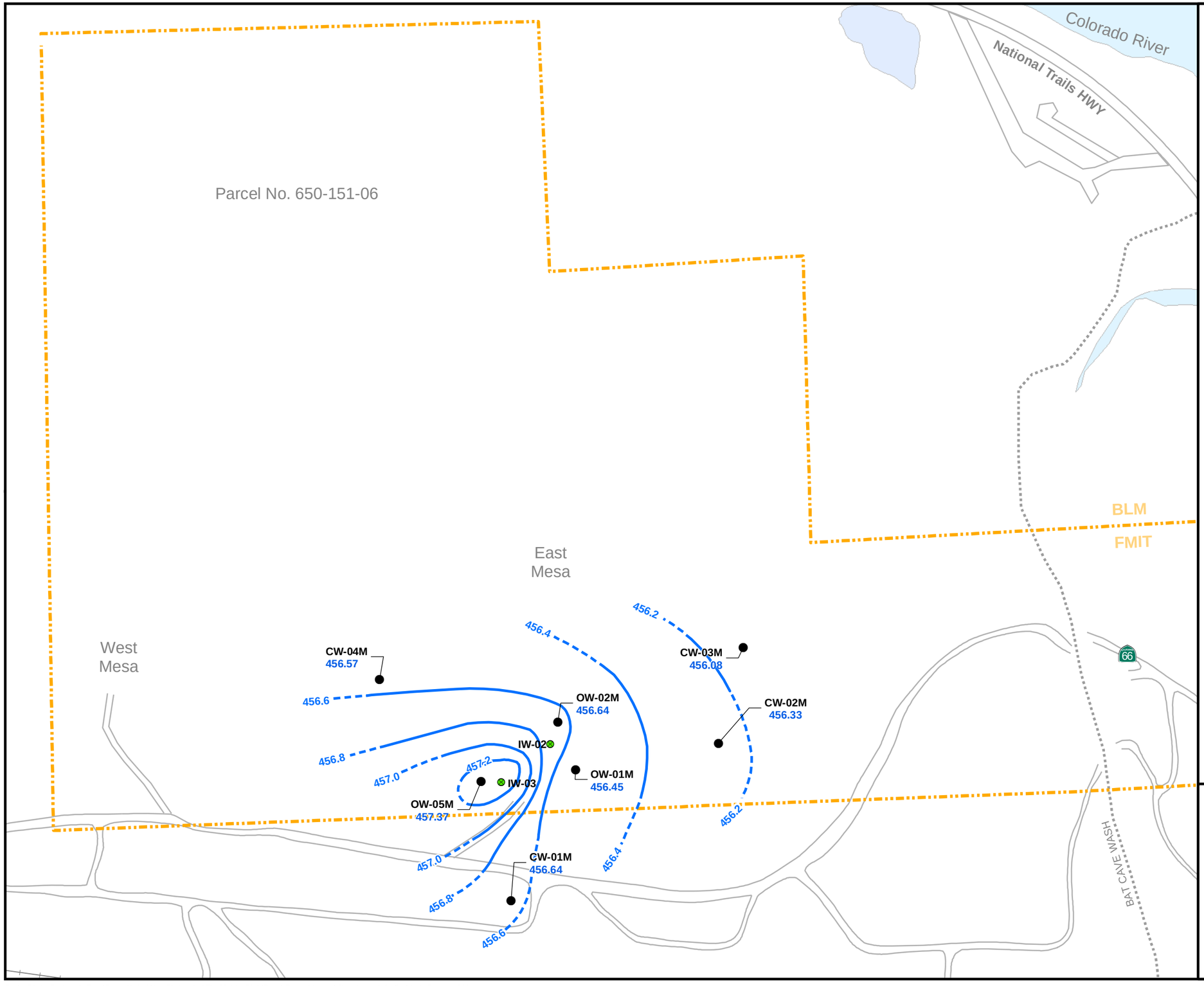

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well
- Property Line
- **OW-05M** 457.37 — Salinity- and temperature-adjusted groundwater head elevation in feet above mean sea level (amsl).
- Groudwater elevation contour in feet amsl (0.2 foot interval). Dashed where inferred.

Notes:
BLM = Bureau of Land Management
FMIT = Fort Mojave Indian Tribe

Data posted and contoured from December 3, 2018 manual water level measurement.

N

0 250 500 Feet

1 inch = 250 feet

California State Plane North American Datum of 1983, Zone 5 U.S. Feet

FIGURE 6B
GROUNDWATER ELEVATION CONTOURS FOR MID-DEPTH WELLS, DECEMBER 3, 2018

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

ARCADIS

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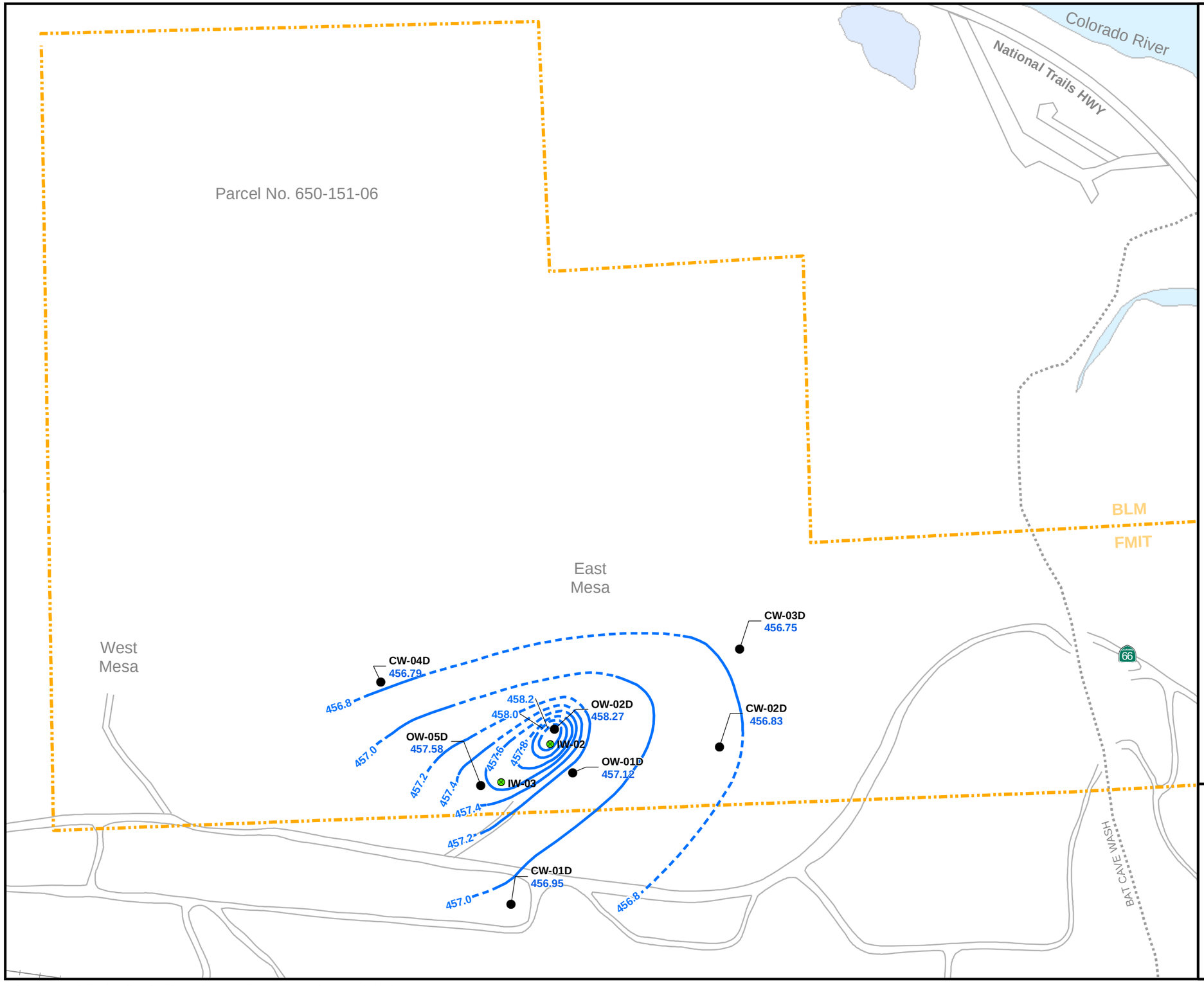

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well
- Property Line

OW-05D 457.58 — Salinity- and temperature-adjusted groundwater head elevation in feet above mean sea level (amsl).

Groudwater elevation contour in feet amsl (0.2 foot interval). Dashed where inferred.

Notes:
BLM = Bureau of Land Management
FMIT = Fort Mojave Indian Tribe

Data posted and contoured from December 3, 2018 manual water level measurement.

N

0 250 500 Feet

1 inch = 250 feet

California State Plane North American Datum of 1983, Zone 5 U.S. Feet

FIGURE 6C
GROUNDWATER ELEVATION CONTOURS FOR DEEP WELLS, DECEMBER 3, 2018

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

ARCADIS

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APPENDIX A

Laboratory Reports, 2018 (provided on CD-ROM only)

June 21, 2018

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661
TEL: (916) 786-3302
FAX:

Workorder No.: N030627

RE: PG&E Topock-CMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on June 04, 2018 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Liburdi for

Quennie Manimtim
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N030627-001C-MS1 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N030627-001C-MS1, N030646-001C-MS1 and N030646-001C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N030627-002C-MS2, N030646-002C-MS2 and N030646-002C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N030627-001C-MS, N030627-001C-MSD and N030646-006C-MS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Dilution was necessary on some analytes for samples N030627-001 and -003 due to associated internal

standard not meeting method criteria possibly due to matrix interference. Samples were analyzed with dilution and internal standard met method criteria. Affected analytes for this failed internal standard were reported at dilution that meet internal standard recovery limit.

Because the results for total dissolved chromium (1.8 ug/L) and hexavalent chromium (0 ug/L) for sample N030627-003 (MW-901-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.6 and 0.35 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.7 ug/L) and hexavalent chromium (0.4 ug/L) for sample N030627-004 (CW-01M-3V-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.1 and 0.81 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (2.3 ug/L) and hexavalent chromium (0.37 ug/L) for sample N030627-005 (CW-01M-LF-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.0 and 0.85 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (1.8 ug/L) and hexavalent chromium (0 ug/L) for sample N030627-003 (MW-901-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.7 ug/L) and hexavalent chromium (0.4 ug/L) for sample N030627-004 (CW-01M-3V-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (2.3 ug/L) and hexavalent chromium (0.37 ug/L) for sample N030627-005 (CW-01M-LF-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary for all samples due to precipitation upon the addition of eluent.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock-CMP, RC000753.801D
Lab Order: N030627
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030627-001A	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-001B	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-001C	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-001D	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-001E	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-001F	CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	6/4/2018	6/21/2018
N030627-002A	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-002B	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-002C	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-002D	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-002E	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-002F	CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	6/4/2018	6/21/2018
N030627-003A	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-003B	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-003C	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-003D	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-003E	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-003F	MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	6/4/2018	6/21/2018
N030627-004A	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-004B	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-004C	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-004D	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-004E	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-004F	CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	6/4/2018	6/21/2018
N030627-005A	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018
N030627-005B	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018
N030627-005C	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018
N030627-005D	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018
N030627-005E	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock-CMP, RC000753.801D
Lab Order: N030627
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030627-005F	CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	6/4/2018	6/21/2018
N030627-006A	MW-725-Q218	Groundwater	6/4/2018 2:45:00 PM	6/4/2018	6/21/2018
N030627-007A	MW-726-Q218	Groundwater	6/4/2018 3:00:00 PM	6/4/2018	6/21/2018

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180605A**	QC Batch: **R124442**			PrepDate			Analyst: **LR**
Specific Conductance	7100	0.10	0.10		umhos/cm	1	6/5/2018 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180605A**	QC Batch: **R124442**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/5/2018 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180605A**	QC Batch: **R124442**			PrepDate			Analyst: **LR**
Specific Conductance	7100	0.10	0.10		umhos/cm	1	6/5/2018 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180605A**	QC Batch: **R124442**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/5/2018 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180605A**	QC Batch: **R124442**			PrepDate			Analyst: **LR**
Specific Conductance	7100	0.10	0.10		umhos/cm	1	6/5/2018 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID **N030627-001DDUP**	SampType: **DUP**	TestCode: **120.1_WPGE**	Units: **umhos/cm**	Prep Date:				RunNo: **124442**		
Client ID: **ZZZZZZ**	Batch ID: **R124442**	TestNo: **EPA 120.1**		Analysis Date: **6/5/2018**				SeqNo: **3044446**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7140.000	0.10						7120	0.281	2	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180605F**	QC Batch: **68321**				PrepDate	**6/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	6/5/2018 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180605F**	QC Batch: **68321**			PrepDate	**6/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/5/2018 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180605F**	QC Batch: **68321**				PrepDate	**6/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	6/5/2018 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180605F**	QC Batch: **68321**			PrepDate	**6/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/5/2018 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180605F**	QC Batch: **68321**			PrepDate	**6/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/5/2018 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-68321	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/5/2018	RunNo:	124492
Client ID:	LCSW	Batch ID:	68321	TestNo:	SM2540C			Analysis Date:	6/5/2018	SeqNo:	3046010

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	961.000	10	1000	0	96.1	80	120				

Sample ID	MB-68321	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/5/2018	RunNo:	124492
Client ID:	PBW	Batch ID:	68321	TestNo:	SM2540C			Analysis Date:	6/5/2018	SeqNo:	3046011

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N030627-001DDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/5/2018	RunNo:	124492
Client ID:	ZZZZZZ	Batch ID:	68321	TestNo:	SM2540C			Analysis Date:	6/5/2018	SeqNo:	3046013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4245.000	50						4175	1.66	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 08:52 AM
Boron	1000	74	100		µg/L	1	6/17/2018 04:49 PM
Calcium	160000	85	500		µg/L	1	6/17/2018 04:49 PM
Iron	77	18	20		µg/L	1	6/17/2018 04:49 PM
Magnesium	17000	48	100		µg/L	1	6/17/2018 04:49 PM
Potassium	13000	85	500		µg/L	1	6/18/2018 01:00 PM
Sodium	1500000	9600	50000		µg/L	100	6/18/2018 01:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68333** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 08:59 AM
Boron	1100	74	100		µg/L	1	6/17/2018 05:07 PM
Calcium	170000	85	500		µg/L	1	6/17/2018 05:07 PM
Iron	ND	18	20		µg/L	1	6/17/2018 05:07 PM
Magnesium	17000	48	100		µg/L	1	6/17/2018 05:07 PM
Potassium	15000	850	5000		µg/L	10	6/18/2018 01:23 PM
Sodium	1700000	9600	50000		µg/L	100	6/18/2018 01:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-003

Client Sample ID: MW-901-Q218
Collection Date: 6/4/2018 1:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:02 AM
Boron	1100	74	100		µg/L	1	6/17/2018 05:16 PM
Calcium	160000	85	500		µg/L	1	6/17/2018 05:16 PM
Iron	ND	18	20		µg/L	1	6/17/2018 05:16 PM
Magnesium	12000	48	100		µg/L	1	6/17/2018 05:16 PM
Potassium	13000	85	500		µg/L	1	6/18/2018 01:47 PM
Sodium	1600000	9600	50000		µg/L	100	6/18/2018 01:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:06 AM
Boron	1100	74	100		µg/L	1	6/17/2018 05:25 PM
Calcium	170000	85	500		µg/L	1	6/17/2018 05:25 PM
Iron	ND	18	20		µg/L	1	6/17/2018 05:25 PM
Magnesium	18000	48	100		µg/L	1	6/17/2018 05:25 PM
Potassium	15000	85	500		µg/L	1	6/18/2018 01:56 PM
Sodium	1700000	9600	50000		µg/L	100	6/18/2018 02:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:09 AM
Boron	1100	74	100		µg/L	1	6/17/2018 05:34 PM
Calcium	160000	85	500		µg/L	1	6/17/2018 05:34 PM
Iron	ND	18	20		µg/L	1	6/17/2018 05:34 PM
Magnesium	12000	48	100		µg/L	1	6/17/2018 05:34 PM
Potassium	14000	85	500		µg/L	1	6/18/2018 02:04 PM
Sodium	1600000	9600	50000		µg/L	100	6/18/2018 02:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **MB-68333**	SampType: **MBLK**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **PBW**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID **LCS1-68333**	SampType: **LCS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **LCSW**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056525**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5023.581	100	5000	0	100	85	115				
Calcium	10087.920	500	10000	0	101	85	115				
Iron	113.252	20	100.0	0	113	85	115				
Magnesium	10196.485	100	10000	0	102	85	115				

Sample ID **N030627-001C-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5909.932	100	5000	1008	98.0	75	125				
Calcium	182438.453	500	10000	161200	212	75	125				S
Iron	115.650	20	100.0	76.58	39.1	75	125				S
Magnesium	26059.736	100	10000	16510	95.5	75	125				

Sample ID **N030646-001C-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5812.583	100	5000	1024	95.8	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030646-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124692	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/17/2018	SeqNo:	3056537	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Calcium	90978.685	500	10000	75190	158	75	125				S	
Iron	100.909	20	100.0	0	101	75	125					
Magnesium	13103.116	100	10000	4725	83.8	75	125					

Sample ID	N030646-001C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124692	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/17/2018	SeqNo:	3056538	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Boron	5671.545	100	5000	1024	92.9	75	125	5813	2.46	20		
Calcium	88290.356	500	10000	75190	131	75	125	90980	3.00	20	S	
Iron	98.304	20	100.0	0	98.3	75	125	100.9	2.62	20		
Magnesium	12740.352	100	10000	4725	80.1	75	125	13100	2.81	20		

Sample ID	MB-68333	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	PBW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056668	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	ND	50										

Sample ID	LCS1-68333	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	LCSW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056669	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10468.855	50	10000	0	105	85	115					

Sample ID	N030627-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056671	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030627-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10399.752	50	10000	0	104	75	125				

Sample ID	N030646-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056681

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10566.540	50	10000	0	106	75	125				

Sample ID	N030646-001C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056682

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10275.184	50	10000	0	103	75	125	10570	2.80	20	

Sample ID	MB-68333	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	PBW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056852

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Sample ID	LCS2-68333	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	LCSW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19318.422	500	20000	0	96.6	85	115				
Sodium	19190.770	500	20000	0	96.0	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030627-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056860

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	37592.968	5000	20000	14860	114	75	125				

Sample ID	N030627-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056864

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1644013.282	50000	20000	1695000	-253	75	125				S

Sample ID	N030646-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1758943.634	50000	20000	1754000	23.9	75	125				S

Sample ID	N030646-002C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1732383.505	50000	20000	1754000	-109	75	125	1759000	1.52	20	S

Sample ID	N030646-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3057042

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	36675.723	2500	20000	13610	115	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030646-002C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3057043

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	36547.000	2500	20000	13610	115	75	125	36680	0.352	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 05:37 PM
Arsenic	1.1	0.081	0.10		µg/L	1	6/7/2018 05:37 PM
Barium	23	0.15	1.0		µg/L	1	6/7/2018 05:37 PM
Beryllium	ND	0.21	2.5		µg/L	5	6/7/2018 05:43 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 05:37 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 05:37 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 05:37 PM
Lead	ND	0.64	5.0		µg/L	5	6/7/2018 05:43 PM
Manganese	0.74	0.26	0.50		µg/L	1	6/7/2018 05:37 PM
Molybdenum	20	0.21	0.50		µg/L	1	6/7/2018 05:37 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 05:37 PM
Selenium	3.8	0.36	0.50		µg/L	1	6/18/2018 03:12 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 05:37 PM
Thallium	ND	0.96	2.5		µg/L	5	6/7/2018 05:43 PM
Vanadium	2.4	0.28	1.0		µg/L	1	6/7/2018 05:37 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 05:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 06:38 PM
Arsenic	0.26	0.081	0.10		µg/L	1	6/7/2018 06:38 PM
Barium	4.9	0.15	1.0		µg/L	1	6/7/2018 06:38 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 06:38 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 06:38 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 06:38 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 06:38 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 06:38 PM
Manganese	1.3	0.26	0.50		µg/L	1	6/7/2018 06:38 PM
Molybdenum	4.0	0.21	0.50		µg/L	1	6/7/2018 06:38 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 06:38 PM
Selenium	0.83	0.36	0.50		µg/L	1	6/18/2018 04:25 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 06:38 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 06:38 PM
Vanadium	ND	0.28	1.0		µg/L	1	6/7/2018 06:38 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 06:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-003

Client Sample ID: MW-901-Q218
Collection Date: 6/4/2018 1:35:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 06:50 PM
Arsenic	1.1	0.081	0.10		µg/L	1	6/7/2018 06:50 PM
Barium	77	0.15	1.0		µg/L	1	6/7/2018 06:50 PM
Beryllium	ND	0.21	2.5		µg/L	5	6/7/2018 06:55 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 06:50 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 06:50 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 06:50 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 06:50 PM
Manganese	0.92	0.26	0.50		µg/L	1	6/7/2018 06:50 PM
Molybdenum	16	0.21	0.50		µg/L	1	6/7/2018 06:50 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 06:50 PM
Selenium	3.4	0.36	0.50		µg/L	1	6/7/2018 06:50 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 06:50 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 06:50 PM
Vanadium	2.4	0.28	1.0		µg/L	1	6/7/2018 06:50 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-004

Client Sample ID: CW-01M-3V-Q218
Collection Date: 6/4/2018 2:26:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 07:01 PM
Arsenic	1.1	0.081	0.10		µg/L	1	6/7/2018 07:01 PM
Barium	77	0.15	1.0		µg/L	1	6/7/2018 07:01 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 07:01 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 07:01 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 07:01 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 07:01 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 07:01 PM
Manganese	0.91	0.26	0.50		µg/L	1	6/7/2018 07:01 PM
Molybdenum	16	0.21	0.50		µg/L	1	6/7/2018 07:01 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 07:01 PM
Selenium	3.3	0.36	0.50		µg/L	1	6/7/2018 07:01 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 07:01 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 07:01 PM
Vanadium	2.4	0.28	1.0		µg/L	1	6/7/2018 07:01 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 07:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 07:12 PM
Arsenic	1.2	0.081	0.10		µg/L	1	6/7/2018 07:12 PM
Barium	74	0.15	1.0		µg/L	1	6/7/2018 07:12 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 07:12 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 07:12 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 07:12 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 07:12 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 07:12 PM
Manganese	1.3	0.26	0.50		µg/L	1	6/7/2018 07:12 PM
Molybdenum	17	0.21	0.50		µg/L	1	6/7/2018 07:12 PM
Nickel	1.1	0.26	1.0		µg/L	1	6/7/2018 07:12 PM
Selenium	3.2	0.36	0.50		µg/L	1	6/7/2018 07:12 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 07:12 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 07:12 PM
Vanadium	2.5	0.28	1.0		µg/L	1	6/7/2018 07:12 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **MB-68342** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/6/2018** RunNo: **124539**
Client ID: **PBW** Batch ID: **68342** TestNo: **EPA 200.8** Analysis Date: **6/7/2018** SeqNo: **3048467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Barium	0.226	1.0									
Beryllium	ND	0.50									
Cadmium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.0									
Lead	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Nickel	ND	1.0									
Selenium	ND	0.50									
Silver	ND	0.50									
Thallium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **N030627-001C-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/6/2018** RunNo: **124539**
Client ID: **ZZZZZZ** Batch ID: **68342** TestNo: **EPA 200.8** Analysis Date: **6/7/2018** SeqNo: **3048474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.267	0.50	10.00	0	103	75	125				
Arsenic	12.075	0.10	10.00	1.080	110	75	125				
Barium	33.615	1.0	10.00	22.83	108	75	125				
Cadmium	10.230	0.50	10.00	0	102	75	125				
Cobalt	8.695	0.50	10.00	0	86.9	75	125				
Copper	5.744	1.0	10.00	0	57.4	75	125				S
Manganese	99.792	0.50	100.0	0.7378	99.1	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048474

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	32.172	0.50	10.00	20.38	118	75	125				
Nickel	9.838	1.0	10.00	0	98.4	75	125				
Silver	9.526	0.50	10.00	0	95.3	75	125				
Vanadium	12.691	1.0	10.00	2.364	103	75	125				
Zinc	109.470	10	100.0	0	109	75	125				

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048475

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	11.847	2.5	10.00	0	118	75	125				
Lead	11.104	5.0	10.00	0	111	75	125				
Thallium	10.196	2.5	10.00	0	102	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048476

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.252	0.50	10.00	0	103	75	125	10.27	0.143	20	
Arsenic	12.148	0.10	10.00	1.080	111	75	125	12.08	0.604	20	
Barium	33.781	1.0	10.00	22.83	109	75	125	33.62	0.493	20	
Cadmium	10.262	0.50	10.00	0	103	75	125	10.23	0.307	20	
Cobalt	8.630	0.50	10.00	0	86.3	75	125	8.695	0.753	20	
Copper	5.642	1.0	10.00	0	56.4	75	125	5.744	1.78	20	S
Manganese	98.699	0.50	100.0	0.7378	98.0	75	125	99.79	1.10	20	
Molybdenum	32.059	0.50	10.00	20.38	117	75	125	32.17	0.351	20	
Nickel	9.752	1.0	10.00	0	97.5	75	125	9.838	0.880	20	
Silver	9.486	0.50	10.00	0	94.9	75	125	9.526	0.425	20	
Vanadium	12.667	1.0	10.00	2.364	103	75	125	12.69	0.185	20	
Zinc	109.393	10	100.0	0	109	75	125	109.5	0.0703	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	12.028	2.5	10.00	0	120	75	125	11.85	1.52	20	
Lead	10.878	5.0	10.00	0	109	75	125	11.10	2.05	20	
Thallium	9.601	2.5	10.00	0	96.0	75	125	10.20	6.02	20	

Sample ID	N030646-006C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048508

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.212	0.50	10.00	0	102	75	125				
Arsenic	13.895	0.10	10.00	2.752	111	75	125				
Barium	30.314	1.0	10.00	18.61	117	75	125				
Beryllium	12.406	0.50	10.00	0	124	75	125				
Cadmium	10.389	0.50	10.00	0	104	75	125				
Cobalt	8.562	0.50	10.00	0	85.6	75	125				
Copper	5.541	1.0	10.00	0	55.4	75	125				S
Lead	10.618	1.0	10.00	0	106	75	125				
Manganese	98.418	0.50	100.0	1.160	97.3	75	125				
Molybdenum	31.721	0.50	10.00	19.42	123	75	125				
Nickel	9.551	1.0	10.00	0	95.5	75	125				
Selenium	13.766	0.50	10.00	3.749	100	75	125				
Silver	9.399	0.50	10.00	0	94.0	75	125				
Thallium	9.491	0.50	10.00	0	94.9	75	125				
Vanadium	13.463	1.0	10.00	3.217	102	75	125				
Zinc	72.315	10	100.0	0	72.3	75	125				S

Sample ID	LCS-68342	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	LCSW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.539	0.50	10.00	0	95.4	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	LCS-68342	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	LCSW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.046	0.10	10.00	0	100	85	115				
Barium	10.252	1.0	10.00	0	103	85	115				
Beryllium	10.189	0.50	10.00	0	102	85	115				
Cadmium	10.100	0.50	10.00	0	101	85	115				
Cobalt	9.593	0.50	10.00	0	95.9	85	115				
Copper	10.436	1.0	10.00	0	104	85	115				
Lead	9.811	1.0	10.00	0	98.1	85	115				
Manganese	98.972	0.50	100.0	0	99.0	85	115				
Molybdenum	9.784	0.50	10.00	0	97.8	85	115				
Nickel	10.639	1.0	10.00	0	106	85	115				
Selenium	9.731	0.50	10.00	0	97.3	85	115				
Silver	9.309	0.50	10.00	0	93.1	85	115				
Thallium	9.551	0.50	10.00	0	95.5	85	115				
Vanadium	10.275	1.0	10.00	0	103	85	115				
Zinc	91.690	10	100.0	0	91.7	85	115				

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3056659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	13.804	0.50	10.00	3.808	100	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3056660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	14.072	0.50	10.00	3.808	103	75	125	13.80	1.92	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-001

Client Sample ID: CW-01D-3V-Q218
Collection Date: 6/4/2018 2:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A** QC Batch: **R124470**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/5/2018 11:54 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 05:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-002

Client Sample ID: CW-01D-LF-Q218
Collection Date: 6/4/2018 1:25:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A** QC Batch: **R124470**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/5/2018 12:13 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 06:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-003

Client Sample ID: MW-901-Q218
Collection Date: 6/4/2018 1:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A**	QC Batch: **R124470**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/5/2018 12:32 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**			PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	1.8	0.13	1.0		µg/L	1	6/7/2018 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-004

Client Sample ID: CW-01M-3V-Q218
Collection Date: 6/4/2018 2:26:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A**	QC Batch: **R124470**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.40	0.033	0.20		µg/L	1	6/5/2018 12:51 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**			PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	1.7	0.13	1.0		µg/L	1	6/7/2018 07:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A**	QC Batch: **R124470**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.37	0.033	0.20		µg/L	1	6/5/2018 01:28 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**			PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	2.3	0.13	1.0		µg/L	1	6/7/2018 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-725-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:45:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A**	QC Batch: **R124470**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/5/2018 01:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-726-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 3:00:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180605A**	QC Batch: **R124470**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/5/2018 02:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_CrPGE

Sample ID	**MB-68342**	SampType:	**MBLK**	TestCode:	**200.8DIS_Cr**	Units:	**µg/L**	Prep Date:	**6/6/2018**	RunNo:	**124539**
Client ID:	**PBW**	Batch ID:	**68342**	TestNo:	**EPA 200.8**			Analysis Date:	**6/7/2018**	SeqNo:	**3048616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	**N030627-001C-MS**	SampType:	**MS**	TestCode:	**200.8DIS_Cr**	Units:	**µg/L**	Prep Date:	**6/6/2018**	RunNo:	**124539**
Client ID:	**ZZZZZZ**	Batch ID:	**68342**	TestNo:	**EPA 200.8**			Analysis Date:	**6/7/2018**	SeqNo:	**3048623**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.734	1.0	10.00	0.9096	98.2	75	125				

Sample ID	**N030627-001C-MSD**	SampType:	**MSD**	TestCode:	**200.8DIS_Cr**	Units:	**µg/L**	Prep Date:	**6/6/2018**	RunNo:	**124539**
Client ID:	**ZZZZZZ**	Batch ID:	**68342**	TestNo:	**EPA 200.8**			Analysis Date:	**6/7/2018**	SeqNo:	**3048625**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.629	1.0	10.00	0.9096	97.2	75	125	10.73	0.984	20	

Sample ID	**N030646-006C-MS**	SampType:	**MS**	TestCode:	**200.8DIS_Cr**	Units:	**µg/L**	Prep Date:	**6/6/2018**	RunNo:	**124539**
Client ID:	**ZZZZZZ**	Batch ID:	**68342**	TestNo:	**EPA 200.8**			Analysis Date:	**6/7/2018**	SeqNo:	**3048657**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.203	1.0	10.00	0.4053	98.0	75	125				

Sample ID	**LCS-68342**	SampType:	**LCS**	TestCode:	**200.8DIS_Cr**	Units:	**µg/L**	Prep Date:	**6/6/2018**	RunNo:	**124539**
Client ID:	**LCSW**	Batch ID:	**68342**	TestNo:	**EPA 200.8**			Analysis Date:	**6/7/2018**	SeqNo:	**3048664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.084	1.0	10.00	0	101	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R124470	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	PBW	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045226

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID	LCS-R124470	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	LCSW	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045227

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.127	0.20	5.000	0	103	90	110				

Sample ID	N030625-001ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	ZZZZZZ	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045238

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	15.166	0.20						15.22	0.370	20	

Sample ID	N030627-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	ZZZZZZ	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045240

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.047	0.20	1.000	0.08740	96.0	90	110				

Sample ID	N030627-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	ZZZZZZ	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045242

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.057	0.20	1.000	0.08920	96.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID **N030627-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124470**
Client ID: **ZZZZZZ**	Batch ID: **R124470**	TestNo: **EPA 218.6**		Analysis Date: **6/5/2018**	SeqNo: **3045244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0.09350	95.8	90	110				

Sample ID **N030627-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124470**
Client ID: **ZZZZZZ**	Batch ID: **R124470**	TestNo: **EPA 218.6**		Analysis Date: **6/5/2018**	SeqNo: **3045246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.492	0.20	1.000	0.4029	109	90	110				

Sample ID **N030627-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124470**
Client ID: **ZZZZZZ**	Batch ID: **R124470**	TestNo: **EPA 218.6**		Analysis Date: **6/5/2018**	SeqNo: **3045250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.455	0.20	1.000	0.3691	109	90	110				

Sample ID **N030627-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124470**
Client ID: **ZZZZZZ**	Batch ID: **R124470**	TestNo: **EPA 218.6**		Analysis Date: **6/5/2018**	SeqNo: **3045252**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.078	0.20	1.000	0	108	90	110				

Sample ID **N030627-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124470**
Client ID: **ZZZZZZ**	Batch ID: **R124470**	TestNo: **EPA 218.6**		Analysis Date: **6/5/2018**	SeqNo: **3045254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N030627-002AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124470
Client ID:	ZZZZZZ	Batch ID:	R124470	TestNo:	EPA 218.6			Analysis Date:	6/5/2018	SeqNo:	3045256

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.133	0.20	1.000	0.08920	104	90	110	1.057	6.93	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180605E**	QC Batch: **R124451**			PrepDate			Analyst: **LR**
Turbidity	0.46	0.10	0.10		NTU	1	6/5/2018 01:26 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180605E**	QC Batch: **R124451**			PrepDate			Analyst: **LR**
Turbidity	3.5	0.10	0.10		NTU	1	6/5/2018 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180605E**	QC Batch: **R124451**			PrepDate			Analyst: **LR**
Turbidity	1.0	0.10	0.10		NTU	1	6/5/2018 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180605E**	QC Batch: **R124451**			PrepDate			Analyst: **LR**
Turbidity	0.33	0.10	0.10		NTU	1	6/5/2018 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180605E**	QC Batch: **R124451**			PrepDate			Analyst: **LR**
Turbidity	0.35	0.10	0.10		NTU	1	6/5/2018 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID	**MB-R124451**	SampType:	**MBLK**	TestCode:	**2130_W**	Units:	**NTU**	Prep Date:		RunNo:	**124451**
Client ID:	**PBW**	Batch ID:	**R124451**	TestNo:	**SM 2130B**			Analysis Date:	**6/5/2018**	SeqNo:	**3044602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID	**N030627-002DDUP**	SampType:	**DUP**	TestCode:	**2130_W**	Units:	**NTU**	Prep Date:		RunNo:	**124451**
Client ID:	**ZZZZZZ**	Batch ID:	**R124451**	TestNo:	**SM 2130B**			Analysis Date:	**6/5/2018**	SeqNo:	**3044607**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	3.480	0.10						3.460	0.576	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	66	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	67	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	66	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	85	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	81	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID **LCS-R124530**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **124530**			
Client ID: **LCSW**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**			SeqNo: **3048137**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	99.576	5.0	100.0	0	99.6	85	115				

Sample ID **MB-R124530**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **124530**			
Client ID: **PBW**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**			SeqNo: **3048138**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID **N030627-001DDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **124530**			
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**			SeqNo: **3048141**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	66.737	5.0						65.68	1.60	30	

Sample ID **N030646-008DMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **124530**			
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**			SeqNo: **3048154**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	149.364	5.0	100.0	54.03	95.3	75	125				

Sample ID **N030646-008DMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **124530**			
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**			SeqNo: **3048155**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	151.483	5.0	100.0	54.03	97.5	75	125	149.4	1.41	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180606D** QC Batch: **68331** PrepDate **6/6/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180606D** QC Batch: **68331**				PrepDate		**6/6/2018**	Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180606D** QC Batch: **68331** PrepDate **6/6/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_WD

Sample ID	MB-68331	SampType:	MBLK	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124468
Client ID:	PBW	Batch ID:	68331	TestNo:	EPA 245.1			Analysis Date:	6/6/2018	SeqNo:	3045165

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID	LCS-68331	SampType:	LCS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124468
Client ID:	LCSW	Batch ID:	68331	TestNo:	EPA 245.1			Analysis Date:	6/6/2018	SeqNo:	3045166

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.686	0.20	5.000	0	93.7	85	115				

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124468
Client ID:	ZZZZZZ	Batch ID:	68331	TestNo:	EPA 245.1			Analysis Date:	6/6/2018	SeqNo:	3045167

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.452	0.20	5.000	0	89.0	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124468
Client ID:	ZZZZZZ	Batch ID:	68331	TestNo:	EPA 245.1			Analysis Date:	6/6/2018	SeqNo:	3045168

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.708	0.20	5.000	0	94.2	75	125	4.452	5.60	20	

Sample ID	N030646-009C-MS	SampType:	MS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124468
Client ID:	ZZZZZZ	Batch ID:	68331	TestNo:	EPA 245.1			Analysis Date:	6/6/2018	SeqNo:	3045186

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.830	0.20	5.000	0	96.6	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-001

Client Sample ID: CW-01D-3V-Q218
Collection Date: 6/4/2018 2:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/7/2018 06:05 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.4	0.032	0.50		mg/L	5	6/7/2018 01:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/7/2018 09:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-002

Client Sample ID: CW-01D-LF-Q218
Collection Date: 6/4/2018 1:25:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/7/2018 06:51 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.4	0.032	0.50		mg/L	5	6/7/2018 01:34 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/7/2018 10:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-003

Client Sample ID: MW-901-Q218
Collection Date: 6/4/2018 1:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Chloride	2200	4.6	250		mg/L	500	6/7/2018 07:37 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.5	0.032	0.50		mg/L	5	6/7/2018 01:50 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/7/2018 10:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-004

Client Sample ID: CW-01M-3V-Q218
Collection Date: 6/4/2018 2:26:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/7/2018 07:52 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	6/7/2018 02:06 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/7/2018 10:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030627
Project: PG&E Topock-CMP, RC000753.801D
Lab ID: N030627-005

Client Sample ID: CW-01M-LF-Q218
Collection Date: 6/4/2018 1:55:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**			PrepDate				Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/7/2018 08:07 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**			PrepDate				Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	6/7/2018 02:31 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**			PrepDate				Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/7/2018 08:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R124522_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	PBW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047501

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R124522_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	LCSW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.007	0.50	2.000	0	100	90	110				

Sample ID	N030627-002DMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047511

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3137.650	250	1000	2118	102	80	120				

Sample ID	N030627-002DMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047512

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3148.950	250	1000	2118	103	80	120	3138	0.359	20	

Sample ID	N030627-005DDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2050.500	250						2079	1.39	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	MB-R124522_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	PBW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047468

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	LCS-R124522_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	LCSW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047469

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.259	0.10	1.250	0	101	90	110				

Sample ID	N030627-001DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047478

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.640	0.50	6.250	2.386	100	80	120				

Sample ID	N030627-001DMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.674	0.50	6.250	2.386	101	80	120	8.640	0.399	20	

Sample ID	N030646-005DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.487	0.50	6.250	3.412	97.2	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N030646-003DDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047485

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.306	0.20						2.311	0.208	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R124522_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	PBW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID	LCS-R124522_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	LCSW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047574

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.875	0.50	4.000	0	96.9	90	110				

Sample ID	N030627-005DMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047582

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	670.775	25	200.0	474.4	98.2	80	120				

Sample ID	N030627-005DMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047583

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	668.650	25	200.0	474.4	97.1	80	120	670.8	0.317	20	

Sample ID	N030627-001DDUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047587

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	476.085	25						483.6	1.56	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	3.0	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.8	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	1.7	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.4	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 4500N03F_W

Sample ID	MB-R124644	SampType:	MBLK	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	PBW	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054460

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	ND	0.050									

Sample ID	LCS-R124644	SampType:	LCS	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	LCSW	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054461

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	0.466	0.050	0.5000	0	93.3	85	115				

Sample ID	N030627-003EDUP	SampType:	DUP	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054465

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	2.506	0.25						2.791	10.8	20	

Sample ID	N030627-004EMS	SampType:	MS	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054467

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	4.369	0.25	2.500	1.687	107	75	125				

Sample ID	N030627-004EMSD	SampType:	MSD	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054468

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	4.365	0.25	2.500	1.687	107	75	125	4.368	0.0802	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/7/2018 10:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:25:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	680	18	20		ug/L	1	6/7/2018 10:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:35:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/7/2018 10:20 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 2:26:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	35	18	20		ug/L	1	6/7/2018 10:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q218
Lab Order:	N030627	**Collection Date:**	6/4/2018 1:55:00 PM
Project:	PG&E Topock-CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030627-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/7/2018 10:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030627
Project: PG&E Topock-CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **MB-68332**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **ug/L**	Prep Date: **6/6/2018**	RunNo: **124525**
Client ID: **PBW**	Batch ID: **68332**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **6/7/2018**	SeqNo: **3049424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID **LCS-68332**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **ug/L**	Prep Date: **6/6/2018**	RunNo: **124525**
Client ID: **LCSW**	Batch ID: **68332**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **6/7/2018**	SeqNo: **3049427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	99.888	20	100.0	0	99.9	85	115				

Sample ID **N030646-001F-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **ug/L**	Prep Date: **6/6/2018**	RunNo: **124525**
Client ID: **ZZZZZZ**	Batch ID: **68332**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **6/7/2018**	SeqNo: **3049436**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	101.915	20	100.0	0	102	75	125				

Sample ID **N030646-001F-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **ug/L**	Prep Date: **6/6/2018**	RunNo: **124525**
Client ID: **ZZZZZZ**	Batch ID: **68332**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **6/7/2018**	SeqNo: **3049439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	102.400	20	100.0	0	102	75	125	101.9	0.474	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
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P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Others ✓ (Specify: RWQCB)
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	QA/QC: RWQCB ✓
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661	Email to: mbloes@pivox.com	P.O.#
Submitted By: Jason Mahn		Phone: 949-727-1400, ext 200	Fax:
Title: Project Manager	Phone: 916-786-3302 Fax:		Global ID:
Signature: Date: 6/4/18	Sampled By: Jason Mahn	Matrix: Ground-water x; Sediment; Potable; Soil; NPDES; Other Solid; Surface	Specify State:

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Project Name: PG&E Topock - CMP
Project Number: RC000753.801D
Signature: Date: 6/4/18

Sample Receipt Condition

	Y	N
1. Chilled	X	
2. Headspace	X	
3. Container Intact		
4. Seal Present		
5. IR number	2	
6. Method of Cooling:	ICE	

Sample Temp: 4.1 1.8°C

Courier: ASSET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date (mm/dd/yy)	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH 250 mL poly	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 1 L poly	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn 1 L poly	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo 1 L poly	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na, 1 L poly	Dissolved metals (EPA 245.1); HNO3 Mercury 1 L poly	Anions (E300.0); Chloride, Fluoride, Sulfate 1 liter poly	Specific Conductance (E120.1) 1 liter poly	pH (SM4500HB) 1 liter poly	TDS (SM2540C) 1 liter poly	Alkalinity (Total, reported as CaCO3) (SM2320B) 1 liter poly	Turbidity (SM2130B) 1 liter poly	Nitrate/Nitrite as Nitrogen (SM4500N03); H2SO4 125 mL poly	Total metals (SW6010B); HNO3 500 mL poly Fe	Dissolved metals (EPA200.7) FF; HNO3 Na 1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N030627-01	CW-01D-3V-Q218		1435	6/4/18	X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
2	-02	CW-01D-LF-Q218		1325	6/4/18	X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
3	-03	MW-901-Q218		1335	6/4/18	X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
4	-04	CW-01M-3V-Q218		1426	6/4/18	X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
5	-05	CW-01M-LF-Q218		1355	6/4/18	X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
6	-06	MW-725-Q218		1445	6/4/18	X															E	6	P	BNSC	
7	-07	MW-726-R218		1500	6/4/18	X															E	1	P	BC	
8																					E	1	P	BC	
9																									
10																									

Relinquished by (Signature and Printed Name):	Date/Time: 6/4/18 1635	Relinquished by (Signature and Printed Name):	Date/Time: 6/4/18 1635
Relinquished by (Signature and Printed Name):	Date/Time: 6/4/18 1842	Relinquished by (Signature and Printed Name):	Date/Time: 6/4/18 1842
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	6/4/2018	Workorder:	N030627
Rep sample Temp (Deg C):	4.1/1.8	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

For:

Checklist Completed By: MBC 6/5/2018

Reviewed By: LR 180607

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-001A	CW-01D-3V-Q218	6/4/2018 2:35:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-001B			6/18/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030627-001C			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/18/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/18/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030627-001D			6/18/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/18/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/18/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/18/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/18/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030627-001E			6/18/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030627-001F			6/18/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-002A	CW-01D-LF-Q218	6/4/2018 1:25:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-002B			6/18/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030627-002C			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/18/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/18/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030627-002D			6/18/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/18/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/18/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/18/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/18/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030627-002E			6/18/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030627-002F			6/18/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-003A	MW-901-Q218	6/4/2018 1:35:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-003B			6/18/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030627-003C			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/18/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/18/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030627-003D			6/18/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/18/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/18/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/18/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/18/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030627-003E			6/18/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030627-003F			6/18/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-004A	CW-01M-3V-Q218	6/4/2018 2:26:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-004B			6/18/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030627-004C			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/18/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/18/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030627-004D			6/18/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/18/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/18/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/18/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/18/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030627-004E			6/18/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030627-004F			6/18/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-005A	CW-01M-LF-Q218	6/4/2018 1:55:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-005B			6/18/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030627-005C			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/18/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/18/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/18/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/18/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030627-005D			6/18/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/18/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/18/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/18/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/18/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/18/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030627-005E			6/18/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030627-005F			6/18/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/18/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Jun-18

WorkOrder: N030627

Client ID: ARCUS02

Project: PG&E Topock-CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/4/2018

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030627-006A	MW-725-Q218	6/4/2018 2:45:00 PM	6/18/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-007A	MW-726-Q218	6/4/2018 3:00:00 PM	6/18/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030627-008A	FOLDER	6/18/2018	6/18/2018		EDD	RWQCB	☐	☐	☐	LAB
			6/18/2018		Folder	Folder	☐	☐	☐	LAB
			6/18/2018		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: SIGNED

06-Jun-18

				Requested Tests		
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	**SM4500-NH3D**		
N030627-001B / CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	8OZP	1		
N030627-002B / CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	8OZP	1		
N030627-003B / MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	8OZP	1		
N030627-004B / CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	8OZP	1		
N030627-005B / CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	8OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N30627A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Ammonia by SM4500NH3D. EDD requirement Labspec7 edata.

GSO #: 540858618

		Date/Time		Date/Time
Relinquished by:		6/6/2018 17:00	**Received by:**	
Relinquished by:			**Received by:**	

nancy@assetlaboratories.com

From: nancy@assetlaboratories.com
Sent: Wednesday, June 13, 2018 9:01 AM
To: 'Daniel Moore'
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Thank you Dan!

From: Daniel Moore [mailto:Daniel.Moore@critigen.com]
Sent: Wednesday, June 13, 2018 9:00 AM
To: nancy@assetlaboratories.com
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Please report.

Thanks!
Dan

From: nancy@assetlaboratories.com <nancy@assetlaboratories.com>
Sent: Wednesday, June 13, 2018 10:59 AM
To: Daniel Moore <Daniel.Moore@critigen.com>
Cc: 'Marlon B. Cartin' <marlon@assetlaboratories.com>
Subject: RE: N030627 & N030646 for EPA 200.8

Hi Dan,

Beryllium on PS is biased high @ 125.3% (80-120% criteria). However, it passed on MS/MSD @ 118 and 120%, respectively.

Thanks,
Nancy

From: Daniel Moore [mailto:Daniel.Moore@critigen.com]
Sent: Wednesday, June 13, 2018 8:24 AM
To: nancy@assetlaboratories.com
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Hi Nancy

What do the recoveries look like in the PS and MS/MSD? I am assuming they pass, if that is the case, please fill out a CA and report

---

From: nancy@assetlaboratories.com <nancy@assetlaboratories.com>
Sent: Tuesday, June 12, 2018 4:21 PM
To: Daniel Moore <Daniel.Moore@critigen.com>
Cc: 'Marlon B. Cartin' <marlon@assetlaboratories.com>

Subject: N030627 & N030646 for EPA 200.8
Importance: High

Hi Dan,

We are having issues on the internal standard(IS) of Beryllium on CCB5 being low biased at 66.7%. Affected by the CCB5 are the MB, PS, MS/MSD and sample N030627-001. The IS of Be on MB passed at 85.8% and Beryllium on samples & MB are all non-detect(ND).
All other instrument QCs passed for the required analytes.

So, can we also report Beryllium on this run? Please advise.

Thanks,
Nancy

Date of Report: 06/14/2018

Marlon Cartin

ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	N030627
BCL Project:	Level IV
BCL Work Order:	1818030
Invoice ID:	B306894

Enclosed are the results of analyses for samples received by the laboratory on 6/7/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Chain of Custody and Cooler Receipt Form for 1818030 Page 1 of 2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

18-18030

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

QC Level: Level IV

Field Sampler: SIGNED

06-Jun-18

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM4500-NH3D		
-1	N030627-001B / CW-01D-3V-Q218	Groundwater	6/4/2018 2:35:00 PM	8OZP	1		
-2	N030627-002B / CW-01D-LF-Q218	Groundwater	6/4/2018 1:25:00 PM	8OZP	1		
-3	N030627-003B / MW-901-Q218	Groundwater	6/4/2018 1:35:00 PM	8OZP	1		
-4	N030627-004B / CW-01M-3V-Q218	Groundwater	6/4/2018 2:26:00 PM	8OZP	1		
-5	N030627-005B / CW-01M-LF-Q218	Groundwater	6/4/2018 1:55:00 PM	8OZP	1		

CHK BY

DISTRIBUTION

SUB-OUT

General Comments: Please email sample receipt acknowledgement to the PM.
Please use PO#:N30627A Please email Invoices and Account Receivable Statements to ehira@assetlaboratories.com. For questions, call Marion at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.
Please analyze for Ammonia by SM4500NH3D. EDD requirement Labspec7 edata.

GSO #: 540858618

	Date/Time		Date/Time
Relinquished by:	6/6/2018 17:00	Received by:	6.7.18 10:30
Relinquished by:		Received by:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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Chain of Custody and Cooler Receipt Form for 1818030 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-18030

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GSO	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: ptpe Thermometer ID: 274 Date/Time 6.7.18

Temperature: (A) 0.0 °C / (C) 0.8 °C Analyst Init 10:30

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A	A					
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 6/7/18 1753

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1818030-01	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/04/2018 14:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030627-001B / CW-01D-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Client	**Sample Type:**	Groundwater
1818030-02	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/04/2018 13:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030627-002B / CW-01D-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Client	**Sample Type:**	Groundwater
1818030-03	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/04/2018 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030627-003B / MW-901-Q218	**Lab Matrix:**	Water
	Sampled By:	Client	**Sample Type:**	Groundwater
1818030-04	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/04/2018 14:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030627-004B / CW-01M-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Client	**Sample Type:**	Groundwater
1818030-05	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/04/2018 13:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030627-005B / CW-01M-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Client	**Sample Type:**	Groundwater

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818030-01 | **Client Sample Name:** N030627-001B / CW-01D-3V-Q218, 6/4/2018 2:35:00PM, Client

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	**0.75**	**mg/L**	**0.20**		**SM-4500-NH3G**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:31	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818030-02 | **Client Sample Name:** N030627-002B / CW-01D-LF-Q218, 6/4/2018 1:25:00PM, Client

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	**0.21**	**mg/L**	**0.20**		**SM-4500-NH3G**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:32	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818030-03 | **Client Sample Name:** N030627-003B / MW-901-Q218, 6/4/2018 1:35:00PM, Client

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:34	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818030-04 | **Client Sample Name:** N030627-004B / CW-01M-3V-Q218, 6/4/2018 2:26:00PM, Client

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:36	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818030-05 | **Client Sample Name:** N030627-005B / CW-01M-LF-Q218, 6/4/2018 1:55:00PM, Client

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:36	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B016368						
Ammonia as N (Distilled)	B016368-BLK1	ND	mg/L	0.20		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B016368										
Ammonia as N (Distilled)	B016368-BS1	LCS	0.97570	1.0000	mg/L	97.6		85 - 115		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B016368	Used client sample: N										
Ammonia as N (Distilled)	DUP	1817953-02	0.27270	0.32460		mg/L	17.4		20		
	MS	1817953-02	0.27270	1.2497	1.0000	mg/L		97.7		80 - 120	
	MSD	1817953-02	0.27270	1.2289	1.0000	mg/L	1.7	95.6	20	80 - 120	

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:20
Project: Level IV
Project Number: N030627
Project Manager: Marlon Cartin

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

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June 19, 2018

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661
TEL: (916) 786-3302
FAX:

Workorder No.: N030646

RE: PG&E Topock - CMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on June 05, 2018 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Liburdi for

Quennie Manimtim
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N030627-001C-MS1 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N030627-001C-MS1, N030646-001C-MS1 and N030646-001C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N030627-002C-MS2, N030646-002C-MS2 and N030646-002C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N030627-001C-MS, N030627-001C-MSD and N030646-006C-MS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Dilution was necessary on some analytes for samples N030646-001, -002, -004 and -005 due to

associated internal standard not meeting method criteria possibly due to matrix interference. Samples were analyzed with dilution and internal standard met method criteria. Affected analytes for this failed internal standard were reported at dilution that meet internal standard recovery limit.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N030646-007 (CW-04D-LF-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.1 and 0.6 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (4.0 ug/L) and hexavalent chromium (1.3 ug/L) for sample N030646-009 (CW-04M-LF-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.6 and 2.0 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N030646-007 (CW-04D-LF-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (4.0 ug/L) and hexavalent chromium (1.3 ug/L) for sample N030646-009 (CW-04M-LF-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary for most of the samples due to precipitation upon the addition of eluent.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N030646
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030646-001A	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-001B	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-001C	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-001D	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-001E	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-001F	CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018
N030646-002A	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-002B	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-002C	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-002D	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-002E	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-002F	MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	6/5/2018	6/19/2018
N030646-003A	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-003B	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-003C	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-003D	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-003E	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-003F	CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	6/5/2018	6/19/2018
N030646-004A	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-004B	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-004C	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-004D	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-004E	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-004F	CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	6/5/2018	6/19/2018
N030646-005A	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018
N030646-005B	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018
N030646-005C	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018
N030646-005D	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018
N030646-005E	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N030646
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030646-005F	CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	6/5/2018	6/19/2018
N030646-006A	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-006B	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-006C	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-006D	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-006E	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-006F	CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	6/5/2018	6/19/2018
N030646-007A	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-007B	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-007C	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-007D	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-007E	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-007F	CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	6/5/2018	6/19/2018
N030646-008A	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-008B	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-008C	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-008D	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-008E	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-008F	CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	6/5/2018	6/19/2018
N030646-009A	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-009B	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-009C	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-009D	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-009E	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-009F	CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	6/5/2018	6/19/2018
N030646-010A	MW-727-Q218	Groundwater	6/5/2018 2:50:00 PM	6/5/2018	6/19/2018
N030646-011A	MW-728-Q218	Groundwater	6/5/2018 2:30:00 PM	6/5/2018	6/19/2018

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7600	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7700	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	6900	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180606A**	QC Batch: **R124491**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/6/2018 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID	N030646-004DDUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	124491
Client ID:	ZZZZZZ	Batch ID:	R124491	TestNo:	EPA 120.1			Analysis Date:	6/6/2018	SeqNo:	3046003

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7590.000	0.10						7600	0.132	2	

Sample ID	N030646-009DDUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	124491
Client ID:	ZZZZZZ	Batch ID:	R124491	TestNo:	EPA 120.1			Analysis Date:	6/6/2018	SeqNo:	3046009

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	6970.000	0.10						6990	0.287	2	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3800	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**				PrepDate	**6/6/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4400	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180606E**	QC Batch: **68345**			PrepDate	**6/6/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/6/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-68345	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/6/2018	RunNo:	124531
Client ID:	LCSW	Batch ID:	68345	TestNo:	SM2540C			Analysis Date:	6/6/2018	SeqNo:	3048157

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	944.000	10	1000	0	94.4	80	120				

Sample ID	MB-68345	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/6/2018	RunNo:	124531
Client ID:	PBW	Batch ID:	68345	TestNo:	SM2540C			Analysis Date:	6/6/2018	SeqNo:	3048158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N030646-005DDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/6/2018	RunNo:	124531
Client ID:	ZZZZZZ	Batch ID:	68345	TestNo:	SM2540C			Analysis Date:	6/6/2018	SeqNo:	3048164

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4310.000	50						4105	4.87	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-001

Client Sample ID: CW-03D-3V-Q218
Collection Date: 6/5/2018 2:30:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68333** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:12 AM
Boron	1000	74	100		µg/L	1	6/17/2018 05:43 PM
Calcium	75000	85	500		µg/L	1	6/17/2018 05:43 PM
Iron	ND	18	20		µg/L	1	6/17/2018 05:43 PM
Magnesium	4700	48	100		µg/L	1	6/17/2018 05:43 PM
Potassium	12000	85	500		µg/L	1	6/18/2018 02:13 PM
Sodium	1800000	9600	50000		µg/L	100	6/18/2018 02:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-002

Client Sample ID: MW-902-Q218
Collection Date: 6/5/2018 2:40:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68333** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:36 AM
Boron	1100	74	100		µg/L	1	6/17/2018 06:40 PM
Calcium	78000	85	500		µg/L	1	6/17/2018 06:40 PM
Iron	ND	18	20		µg/L	1	6/17/2018 06:40 PM
Magnesium	4900	48	100		µg/L	1	6/17/2018 06:40 PM
Potassium	14000	430	2500		µg/L	5	6/18/2018 02:52 PM
Sodium	1800000	9600	50000		µg/L	100	6/18/2018 03:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-003

Client Sample ID: CW-03D-LF-Q218
Collection Date: 6/5/2018 1:12:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68333** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:41 AM
Boron	1000	74	100		µg/L	1	6/17/2018 06:50 PM
Calcium	73000	85	500		µg/L	1	6/17/2018 06:50 PM
Iron	ND	18	20		µg/L	1	6/17/2018 06:50 PM
Magnesium	4400	48	100		µg/L	1	6/17/2018 06:50 PM
Potassium	13000	85	500		µg/L	1	6/18/2018 03:30 PM
Sodium	1700000	9600	50000		µg/L	100	6/18/2018 03:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:45 AM
Boron	1300	74	100		µg/L	1	6/17/2018 06:59 PM
Calcium	190000	85	500		µg/L	1	6/17/2018 06:59 PM
Iron	32	18	20		µg/L	1	6/17/2018 06:59 PM
Magnesium	13000	48	100		µg/L	1	6/17/2018 06:59 PM
Potassium	16000	85	500		µg/L	1	6/18/2018 03:53 PM
Sodium	1900000	9600	50000		µg/L	100	6/18/2018 03:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-005

Client Sample ID: CW-03M-LF-Q218
Collection Date: 6/5/2018 1:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:48 AM
Boron	1200	74	100		µg/L	1	6/17/2018 07:08 PM
Calcium	190000	85	500		µg/L	1	6/17/2018 07:08 PM
Iron	ND	18	20		µg/L	1	6/17/2018 07:08 PM
Magnesium	13000	48	100		µg/L	1	6/17/2018 07:08 PM
Potassium	16000	85	500		µg/L	1	6/18/2018 04:02 PM
Sodium	1900000	9600	50000		µg/L	100	6/18/2018 04:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:51 AM
Boron	1100	74	100		µg/L	1	6/17/2018 07:17 PM
Calcium	140000	85	500		µg/L	1	6/17/2018 07:17 PM
Iron	ND	18	20		µg/L	1	6/17/2018 07:17 PM
Magnesium	8600	48	100		µg/L	1	6/17/2018 07:17 PM
Potassium	14000	85	500		µg/L	1	6/18/2018 04:11 PM
Sodium	1700000	9600	50000		µg/L	100	6/18/2018 04:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:55 AM
Boron	1000	74	100		µg/L	1	6/17/2018 07:26 PM
Calcium	140000	85	500		µg/L	1	6/17/2018 07:26 PM
Iron	ND	18	20		µg/L	1	6/17/2018 07:26 PM
Magnesium	8300	48	100		µg/L	1	6/17/2018 07:26 PM
Potassium	14000	85	500		µg/L	1	6/18/2018 04:19 PM
Sodium	1700000	9600	50000		µg/L	100	6/18/2018 04:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 09:58 AM
Boron	970	74	100		µg/L	1	6/17/2018 07:35 PM
Calcium	200000	85	500		µg/L	1	6/17/2018 07:35 PM
Iron	ND	18	20		µg/L	1	6/17/2018 07:35 PM
Magnesium	14000	48	100		µg/L	1	6/17/2018 07:35 PM
Potassium	15000	85	500		µg/L	1	6/18/2018 04:47 PM
Sodium	1600000	9600	50000		µg/L	100	6/18/2018 04:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68333**				PrepDate	**6/6/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:08 AM
Boron	970	74	100		µg/L	1	6/17/2018 07:59 PM
Calcium	190000	85	500		µg/L	1	6/17/2018 07:59 PM
Iron	41	18	20		µg/L	1	6/17/2018 07:59 PM
Magnesium	14000	48	100		µg/L	1	6/17/2018 07:59 PM
Potassium	15000	85	500		µg/L	1	6/18/2018 04:55 PM
Sodium	1600000	9600	50000		µg/L	100	6/18/2018 05:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **MB-68333**	SampType: **MBLK**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **PBW**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID **LCS1-68333**	SampType: **LCS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **LCSW**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056525**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5023.581	100	5000	0	100	85	115				
Calcium	10087.920	500	10000	0	101	85	115				
Iron	113.252	20	100.0	0	113	85	115				
Magnesium	10196.485	100	10000	0	102	85	115				

Sample ID **N030627-001C-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5909.932	100	5000	1008	98.0	75	125				
Calcium	182438.453	500	10000	161200	212	75	125				S
Iron	115.650	20	100.0	76.58	39.1	75	125				S
Magnesium	26059.736	100	10000	16510	95.5	75	125				

Sample ID **N030646-001C-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68333**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5812.583	100	5000	1024	95.8	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030646-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124692	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/17/2018	SeqNo:	3056537	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Calcium	90978.685	500	10000	75190	158	75	125				S	
Iron	100.909	20	100.0	0	101	75	125					
Magnesium	13103.116	100	10000	4725	83.8	75	125					

Sample ID	N030646-001C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124692	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/17/2018	SeqNo:	3056538	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Boron	5671.545	100	5000	1024	92.9	75	125	5813	2.46	20		
Calcium	88290.356	500	10000	75190	131	75	125	90980	3.00	20	S	
Iron	98.304	20	100.0	0	98.3	75	125	100.9	2.62	20		
Magnesium	12740.352	100	10000	4725	80.1	75	125	13100	2.81	20		

Sample ID	MB-68333	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	PBW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056668	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	ND	50										

Sample ID	LCS1-68333	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	LCSW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056669	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10468.855	50	10000	0	105	85	115					

Sample ID	N030627-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694	
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056671	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030627-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10399.752	50	10000	0	104	75	125				

Sample ID	N030646-001C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056681

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10566.540	50	10000	0	106	75	125				

Sample ID	N030646-001C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124694
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056682

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10275.184	50	10000	0	103	75	125	10570	2.80	20	

Sample ID	MB-68333	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	PBW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056852

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Sample ID	LCS2-68333	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	LCSW	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19318.422	500	20000	0	96.6	85	115				
Sodium	19190.770	500	20000	0	96.0	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030627-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056860

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	37592.968	5000	20000	14860	114	75	125				

Sample ID	N030627-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056864

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1644013.282	50000	20000	1695000	-253	75	125				S

Sample ID	N030646-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1758943.634	50000	20000	1754000	23.9	75	125				S

Sample ID	N030646-002C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1732383.505	50000	20000	1754000	-109	75	125	1759000	1.52	20	S

Sample ID	N030646-002C-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3057042

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	36675.723	2500	20000	13610	115	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030646-002C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124702
Client ID:	ZZZZZZ	Batch ID:	68333	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3057043

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	36547.000	2500	20000	13610	115	75	125	36680	0.352	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-001

Client Sample ID: CW-03D-3V-Q218
Collection Date: 6/5/2018 2:30:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 07:57 PM
Arsenic	1.4	0.081	0.10		µg/L	1	6/7/2018 07:57 PM
Barium	16	0.15	1.0		µg/L	1	6/7/2018 07:57 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 07:57 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 07:57 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 07:57 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 07:57 PM
Lead	ND	0.64	5.0		µg/L	5	6/7/2018 08:02 PM
Manganese	1.8	0.26	0.50		µg/L	1	6/7/2018 07:57 PM
Molybdenum	15	0.21	0.50		µg/L	1	6/7/2018 07:57 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 07:57 PM
Selenium	3.2	0.36	0.50		µg/L	1	6/7/2018 07:57 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 07:57 PM
Thallium	ND	0.96	2.5		µg/L	5	6/7/2018 08:02 PM
Vanadium	2.5	0.28	1.0		µg/L	1	6/7/2018 07:57 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 07:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-002

Client Sample ID: MW-902-Q218
Collection Date: 6/5/2018 2:40:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 08:08 PM
Arsenic	1.5	0.081	0.10		µg/L	1	6/7/2018 08:08 PM
Barium	17	0.15	1.0		µg/L	1	6/7/2018 08:08 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 08:08 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 08:08 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 08:08 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 08:08 PM
Lead	ND	0.64	5.0		µg/L	5	6/7/2018 08:13 PM
Manganese	1.8	0.26	0.50		µg/L	1	6/7/2018 08:08 PM
Molybdenum	16	0.21	0.50		µg/L	1	6/7/2018 08:08 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 08:08 PM
Selenium	3.5	0.36	0.50		µg/L	1	6/7/2018 08:08 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 08:08 PM
Thallium	ND	0.96	2.5		µg/L	5	6/7/2018 08:13 PM
Vanadium	2.7	0.28	1.0		µg/L	1	6/7/2018 08:08 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 08:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 08:19 PM
Arsenic	1.5	0.081	0.10		µg/L	1	6/7/2018 08:19 PM
Barium	15	0.15	1.0		µg/L	1	6/7/2018 08:19 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 08:19 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 08:19 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 08:19 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 08:19 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 08:19 PM
Manganese	2.1	0.26	0.50		µg/L	1	6/7/2018 08:19 PM
Molybdenum	15	0.21	0.50		µg/L	1	6/7/2018 08:19 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 08:19 PM
Selenium	3.5	0.36	0.50		µg/L	1	6/7/2018 08:19 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 08:19 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 08:19 PM
Vanadium	2.6	0.28	1.0		µg/L	1	6/7/2018 08:19 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 08:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-004

Client Sample ID: CW-03M-3V-Q218
Collection Date: 6/5/2018 2:18:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 08:30 PM
Arsenic	1.2	0.081	0.10		µg/L	1	6/7/2018 08:30 PM
Barium	42	0.15	1.0		µg/L	1	6/7/2018 08:30 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 08:30 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 08:30 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 08:30 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 08:30 PM
Lead	ND	0.64	5.0		µg/L	5	6/7/2018 08:47 PM
Manganese	1.1	0.26	0.50		µg/L	1	6/7/2018 08:30 PM
Molybdenum	27	0.21	0.50		µg/L	1	6/7/2018 08:30 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 08:30 PM
Selenium	2.4	0.36	0.50		µg/L	1	6/7/2018 08:30 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 08:30 PM
Thallium	ND	0.96	2.5		µg/L	5	6/7/2018 08:47 PM
Vanadium	2.7	0.28	1.0		µg/L	1	6/7/2018 08:30 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 08:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**				PrepDate	**6/6/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 08:52 PM
Arsenic	1.3	0.081	0.10		µg/L	1	6/7/2018 08:52 PM
Barium	41	0.15	1.0		µg/L	1	6/7/2018 08:52 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 08:52 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 08:52 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 08:52 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 08:52 PM
Lead	ND	0.64	5.0		µg/L	5	6/7/2018 08:58 PM
Manganese	1.1	0.26	0.50		µg/L	1	6/7/2018 08:52 PM
Molybdenum	28	0.21	0.50		µg/L	1	6/7/2018 08:52 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 08:52 PM
Selenium	2.4	0.36	0.50		µg/L	1	6/7/2018 08:52 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 08:52 PM
Thallium	ND	0.96	2.5		µg/L	5	6/7/2018 08:58 PM
Vanadium	2.7	0.28	1.0		µg/L	1	6/7/2018 08:52 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 08:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-006

Client Sample ID: CW-04D-3V-Q218
Collection Date: 6/5/2018 10:40:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 09:04 PM
Arsenic	2.8	0.081	0.10		µg/L	1	6/7/2018 09:04 PM
Barium	19	0.15	1.0		µg/L	1	6/7/2018 09:04 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 09:04 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 09:04 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 09:04 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 09:04 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 09:04 PM
Manganese	1.2	0.26	0.50		µg/L	1	6/7/2018 09:04 PM
Molybdenum	19	0.21	0.50		µg/L	1	6/7/2018 09:04 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 09:04 PM
Selenium	3.7	0.36	0.50		µg/L	1	6/7/2018 09:04 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 09:04 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 09:04 PM
Vanadium	3.2	0.28	1.0		µg/L	1	6/7/2018 09:04 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 09:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**				PrepDate	**6/6/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 09:26 PM
Arsenic	2.7	0.081	0.10		µg/L	1	6/7/2018 09:26 PM
Barium	19	0.15	1.0		µg/L	1	6/7/2018 09:26 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 09:26 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 09:26 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 09:26 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 09:26 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 09:26 PM
Manganese	2.2	0.26	0.50		µg/L	1	6/7/2018 09:26 PM
Molybdenum	20	0.21	0.50		µg/L	1	6/7/2018 09:26 PM
Nickel	1.3	0.26	1.0		µg/L	1	6/7/2018 09:26 PM
Selenium	3.5	0.36	0.50		µg/L	1	6/7/2018 09:26 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 09:26 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 09:26 PM
Vanadium	3.1	0.28	1.0		µg/L	1	6/7/2018 09:26 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 09:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-008

Client Sample ID: CW-04M-3V-Q218
Collection Date: 6/5/2018 10:10:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 09:37 PM
Arsenic	2.2	0.081	0.10		µg/L	1	6/7/2018 09:37 PM
Barium	110	0.15	1.0		µg/L	1	6/7/2018 09:37 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 09:37 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 09:37 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 09:37 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 09:37 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 09:37 PM
Manganese	2.4	0.26	0.50		µg/L	1	6/7/2018 09:37 PM
Molybdenum	10	0.21	0.50		µg/L	1	6/7/2018 09:37 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 09:37 PM
Selenium	3.3	0.36	0.50		µg/L	1	6/7/2018 09:37 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 09:37 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 09:37 PM
Vanadium	3.5	0.28	1.0		µg/L	1	6/7/2018 09:37 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 09:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-009

Client Sample ID: CW-04M-LF-Q218
Collection Date: 6/5/2018 9:32:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180607B** QC Batch: **68342** PrepDate **6/6/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/7/2018 09:59 PM
Arsenic	2.2	0.081	0.10		µg/L	1	6/7/2018 09:59 PM
Barium	110	0.15	1.0		µg/L	1	6/7/2018 09:59 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/7/2018 09:59 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/7/2018 09:59 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/7/2018 09:59 PM
Copper	ND	0.55	1.0		µg/L	1	6/7/2018 09:59 PM
Lead	ND	0.13	1.0		µg/L	1	6/7/2018 09:59 PM
Manganese	1.5	0.26	0.50		µg/L	1	6/7/2018 09:59 PM
Molybdenum	10	0.21	0.50		µg/L	1	6/7/2018 09:59 PM
Nickel	ND	0.26	1.0		µg/L	1	6/7/2018 09:59 PM
Selenium	3.6	0.36	0.50		µg/L	1	6/7/2018 09:59 PM
Silver	ND	0.23	0.50		µg/L	1	6/7/2018 09:59 PM
Thallium	ND	0.19	0.50		µg/L	1	6/7/2018 09:59 PM
Vanadium	3.7	0.28	1.0		µg/L	1	6/7/2018 09:59 PM
Zinc	ND	2.3	10		µg/L	1	6/7/2018 09:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **MB-68342** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/6/2018** RunNo: **124539**
Client ID: **PBW** Batch ID: **68342** TestNo: **EPA 200.8** Analysis Date: **6/7/2018** SeqNo: **3048467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Barium	0.226	1.0									
Beryllium	ND	0.50									
Cadmium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.0									
Lead	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Nickel	ND	1.0									
Selenium	ND	0.50									
Silver	ND	0.50									
Thallium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **N030627-001C-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/6/2018** RunNo: **124539**
Client ID: **ZZZZZZ** Batch ID: **68342** TestNo: **EPA 200.8** Analysis Date: **6/7/2018** SeqNo: **3048474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.267	0.50	10.00	0	103	75	125				
Arsenic	12.075	0.10	10.00	1.080	110	75	125				
Barium	33.615	1.0	10.00	22.83	108	75	125				
Cadmium	10.230	0.50	10.00	0	102	75	125				
Cobalt	8.695	0.50	10.00	0	86.9	75	125				
Copper	5.744	1.0	10.00	0	57.4	75	125				S
Manganese	99.792	0.50	100.0	0.7378	99.1	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048474

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	32.172	0.50	10.00	20.38	118	75	125				
Nickel	9.838	1.0	10.00	0	98.4	75	125				
Silver	9.526	0.50	10.00	0	95.3	75	125				
Vanadium	12.691	1.0	10.00	2.364	103	75	125				
Zinc	109.470	10	100.0	0	109	75	125				

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048475

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	11.847	2.5	10.00	0	118	75	125				
Lead	11.104	5.0	10.00	0	111	75	125				
Thallium	10.196	2.5	10.00	0	102	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048476

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.252	0.50	10.00	0	103	75	125	10.27	0.143	20	
Arsenic	12.148	0.10	10.00	1.080	111	75	125	12.08	0.604	20	
Barium	33.781	1.0	10.00	22.83	109	75	125	33.62	0.493	20	
Cadmium	10.262	0.50	10.00	0	103	75	125	10.23	0.307	20	
Cobalt	8.630	0.50	10.00	0	86.3	75	125	8.695	0.753	20	
Copper	5.642	1.0	10.00	0	56.4	75	125	5.744	1.78	20	S
Manganese	98.699	0.50	100.0	0.7378	98.0	75	125	99.79	1.10	20	
Molybdenum	32.059	0.50	10.00	20.38	117	75	125	32.17	0.351	20	
Nickel	9.752	1.0	10.00	0	97.5	75	125	9.838	0.880	20	
Silver	9.486	0.50	10.00	0	94.9	75	125	9.526	0.425	20	
Vanadium	12.667	1.0	10.00	2.364	103	75	125	12.69	0.185	20	
Zinc	109.393	10	100.0	0	109	75	125	109.5	0.0703	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	12.028	2.5	10.00	0	120	75	125	11.85	1.52	20	
Lead	10.878	5.0	10.00	0	109	75	125	11.10	2.05	20	
Thallium	9.601	2.5	10.00	0	96.0	75	125	10.20	6.02	20	

Sample ID	N030646-006C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048508

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.212	0.50	10.00	0	102	75	125				
Arsenic	13.895	0.10	10.00	2.752	111	75	125				
Barium	30.314	1.0	10.00	18.61	117	75	125				
Beryllium	12.406	0.50	10.00	0	124	75	125				
Cadmium	10.389	0.50	10.00	0	104	75	125				
Cobalt	8.562	0.50	10.00	0	85.6	75	125				
Copper	5.541	1.0	10.00	0	55.4	75	125				S
Lead	10.618	1.0	10.00	0	106	75	125				
Manganese	98.418	0.50	100.0	1.160	97.3	75	125				
Molybdenum	31.721	0.50	10.00	19.42	123	75	125				
Nickel	9.551	1.0	10.00	0	95.5	75	125				
Selenium	13.766	0.50	10.00	3.749	100	75	125				
Silver	9.399	0.50	10.00	0	94.0	75	125				
Thallium	9.491	0.50	10.00	0	94.9	75	125				
Vanadium	13.463	1.0	10.00	3.217	102	75	125				
Zinc	72.315	10	100.0	0	72.3	75	125				S

Sample ID	LCS-68342	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	LCSW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.539	0.50	10.00	0	95.4	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	LCS-68342	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	LCSW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.046	0.10	10.00	0	100	85	115				
Barium	10.252	1.0	10.00	0	103	85	115				
Beryllium	10.189	0.50	10.00	0	102	85	115				
Cadmium	10.100	0.50	10.00	0	101	85	115				
Cobalt	9.593	0.50	10.00	0	95.9	85	115				
Copper	10.436	1.0	10.00	0	104	85	115				
Lead	9.811	1.0	10.00	0	98.1	85	115				
Manganese	98.972	0.50	100.0	0	99.0	85	115				
Molybdenum	9.784	0.50	10.00	0	97.8	85	115				
Nickel	10.639	1.0	10.00	0	106	85	115				
Selenium	9.731	0.50	10.00	0	97.3	85	115				
Silver	9.309	0.50	10.00	0	93.1	85	115				
Thallium	9.551	0.50	10.00	0	95.5	85	115				
Vanadium	10.275	1.0	10.00	0	103	85	115				
Zinc	91.690	10	100.0	0	91.7	85	115				

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3056659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	13.804	0.50	10.00	3.808	100	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3056660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	14.072	0.50	10.00	3.808	103	75	125	13.80	1.92	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A**	QC Batch: **R124533**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 09:45 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**			PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 07:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-002

Client Sample ID: MW-902-Q218
Collection Date: 6/5/2018 2:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.1	0.033	0.20		µg/L	1	6/7/2018 10:04 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 08:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 01:51 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 08:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	3.8	0.033	0.20		µg/L	1	6/7/2018 10:42 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	3.9	0.13	1.0		µg/L	1	6/7/2018 08:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	4.1	0.033	0.20		µg/L	1	6/7/2018 10:51 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	4.1	0.13	1.0		µg/L	1	6/7/2018 08:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 11:39 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/7/2018 09:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A**	QC Batch: **R124533**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 11:58 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B**	QC Batch: **68342**			PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	1.1	0.13	1.0		µg/L	1	6/7/2018 09:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.2	0.033	0.20		µg/L	1	6/7/2018 12:16 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	1.5	0.13	1.0		µg/L	1	6/7/2018 09:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-009

Client Sample ID: CW-04M-LF-Q218
Collection Date: 6/5/2018 9:32:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A** QC Batch: **R124533**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.3	0.033	0.20		µg/L	1	6/7/2018 12:35 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180607B** QC Batch: **68342**				PrepDate	**6/6/2018**		Analyst: **CEI**
Chromium	4.0	0.13	1.0		µg/L	1	6/7/2018 09:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-727-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A**	QC Batch: **R124533**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 01:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-728-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180607A**	QC Batch: **R124533**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/7/2018 01:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_CrPGE

Sample ID	MB-68342	SampType:	MBLK	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	PBW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	N030627-001C-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048623

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.734	1.0	10.00	0.9096	98.2	75	125				

Sample ID	N030627-001C-MSD	SampType:	MSD	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048625

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.629	1.0	10.00	0.9096	97.2	75	125	10.73	0.984	20	

Sample ID	N030646-006C-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	ZZZZZZ	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048657

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.203	1.0	10.00	0.4053	98.0	75	125				

Sample ID	LCS-68342	SampType:	LCS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/6/2018	RunNo:	124539
Client ID:	LCSW	Batch ID:	68342	TestNo:	EPA 200.8			Analysis Date:	6/7/2018	SeqNo:	3048664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.084	1.0	10.00	0	101	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID **MB-R124533**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **PBW**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID **LCS-R124533**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **LCSW**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.232	0.20	5.000	0	105	90	110				

Sample ID **N030646-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.188	0.20	1.000	0.1189	107	90	110				

Sample ID **N030646-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.147	0.20	1.000	1.082	106	90	110				

Sample ID **N030646-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.171	0.20	1.000	0.1270	104	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID **N030646-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **124533**
Client ID: **ZZZZZZ** Batch ID: **R124533** TestNo: **EPA 218.6** Analysis Date: **6/7/2018** SeqNo: **3048205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.025	0.20	5.000	3.841	104	90	110				

Sample ID **N030646-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **124533**
Client ID: **ZZZZZZ** Batch ID: **R124533** TestNo: **EPA 218.6** Analysis Date: **6/7/2018** SeqNo: **3048206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.223	0.20	5.000	4.073	103	90	110				

Sample ID **N030646-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **124533**
Client ID: **ZZZZZZ** Batch ID: **R124533** TestNo: **EPA 218.6** Analysis Date: **6/7/2018** SeqNo: **3048208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.192	0.20	1.000	0.1382	105	90	110				

Sample ID **N030646-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **124533**
Client ID: **ZZZZZZ** Batch ID: **R124533** TestNo: **EPA 218.6** Analysis Date: **6/7/2018** SeqNo: **3048210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.192	0.20	1.000	0.1349	106	90	110				

Sample ID **N030646-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **124533**
Client ID: **ZZZZZZ** Batch ID: **R124533** TestNo: **EPA 218.6** Analysis Date: **6/7/2018** SeqNo: **3048212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.231	0.20	1.000	1.209	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID **N030646-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.283	0.20	1.000	1.253	103	90	110				

Sample ID **N030646-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048218**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.128	0.20	1.000	0.05840	107	90	110				

Sample ID **N030646-007ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.134	0.20						0.1349	0	20	

Sample ID **N030646-002AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.155	0.20	1.000	1.082	107	90	110	2.147	0.353	20	

Sample ID **N030646-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **124533**
Client ID: **ZZZZZZ**	Batch ID: **R124533**	TestNo: **EPA 218.6**		Analysis Date: **6/7/2018**	SeqNo: **3048223**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.083	0.20	1.000	0	108	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	0.36	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	0.28	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	2.8	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	2.4	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	2.1	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	0.39	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	5.6	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	0.64	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180606F**	QC Batch: **R124493**			PrepDate			Analyst: **LR**
Turbidity	5.5	0.10	0.10		NTU	1	6/6/2018 01:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID	MB-R124493	SampType:	MBLK	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	124493
Client ID:	PBW	Batch ID:	R124493	TestNo:	SM 2130B			Analysis Date:	6/6/2018	SeqNo:	3046056

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID	N030645-002BDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	124493
Client ID:	ZZZZZZ	Batch ID:	R124493	TestNo:	SM 2130B			Analysis Date:	6/6/2018	SeqNo:	3046059

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	0.130	0.10						0.1500	14.3	30	

Sample ID	N030646-004DDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	124493
Client ID:	ZZZZZZ	Batch ID:	R124493	TestNo:	SM 2130B			Analysis Date:	6/6/2018	SeqNo:	3046065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	2.410	0.10						2.390	0.833	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	64	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	64	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	64	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	52	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	53	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	59	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	60	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	54	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180607C**	QC Batch: **R124530**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	56	1.2	5.0		mg/L	1	6/7/2018 01:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID **LCS-R124530**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124530**
Client ID: **LCSW**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**	SeqNo: **3048137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	99.576	5.0	100.0	0	99.6	85	115				

Sample ID **MB-R124530**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124530**
Client ID: **PBW**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**	SeqNo: **3048138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID **N030627-001DDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124530**
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**	SeqNo: **3048141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	66.737	5.0						65.68	1.60	30	

Sample ID **N030646-008DMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124530**
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**	SeqNo: **3048154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	149.364	5.0	100.0	54.03	95.3	75	125				

Sample ID **N030646-008DMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124530**
Client ID: **ZZZZZZ**	Batch ID: **R124530**	TestNo: **SM 2320 B**		Analysis Date: **6/7/2018**	SeqNo: **3048155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	151.483	5.0	100.0	54.03	97.5	75	125	149.4	1.41	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180606D** QC Batch: **68331**				PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D** QC Batch: **68331**				PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D** QC Batch: **68331**				PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 03:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 04:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**	Analyst: **MG**	
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 04:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180606D**	QC Batch: **68331**			PrepDate	**6/6/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 04:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180606D** QC Batch: **68331** PrepDate **6/6/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	6/6/2018 04:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_WD

Sample ID	**MB-68331**	SampType: **MBLK**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124468**
Client ID:	**PBW**	Batch ID: **68331**	TestNo: **EPA 245.1**		Analysis Date: **6/6/2018**	SeqNo: **3045165**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID	**LCS-68331**	SampType: **LCS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124468**
Client ID:	**LCSW**	Batch ID: **68331**	TestNo: **EPA 245.1**		Analysis Date: **6/6/2018**	SeqNo: **3045166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.686	0.20	5.000	0	93.7	85	115				

Sample ID	**N030627-001C-MS**	SampType: **MS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124468**
Client ID:	**ZZZZZZ**	Batch ID: **68331**	TestNo: **EPA 245.1**		Analysis Date: **6/6/2018**	SeqNo: **3045167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.452	0.20	5.000	0	89.0	75	125				

Sample ID	**N030627-001C-MSD**	SampType: **MSD**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124468**
Client ID:	**ZZZZZZ**	Batch ID: **68331**	TestNo: **EPA 245.1**		Analysis Date: **6/6/2018**	SeqNo: **3045168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.708	0.20	5.000	0	94.2	75	125	4.452	5.60	20	

Sample ID	**N030646-009C-MS**	SampType: **MS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/6/2018**	RunNo: **124468**
Client ID:	**ZZZZZZ**	Batch ID: **68331**	TestNo: **EPA 245.1**		Analysis Date: **6/6/2018**	SeqNo: **3045186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.830	0.20	5.000	0	96.6	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-001

Client Sample ID: CW-03D-3V-Q218
Collection Date: 6/5/2018 2:30:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2000	4.6	250		mg/L	500	6/13/2018 10:51 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.5	0.013	0.20		mg/L	2	6/7/2018 04:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/13/2018 11:06 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-002

Client Sample ID: MW-902-Q218
Collection Date: 6/5/2018 2:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**			
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 11:21 AM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**			
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.3	0.013	0.20		mg/L	2	6/7/2018 05:04 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**			
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/13/2018 11:36 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-003

Client Sample ID: CW-03D-LF-Q218
Collection Date: 6/5/2018 1:12:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2000	4.6	250		mg/L	500	6/13/2018 11:52 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.3	0.013	0.20		mg/L	2	6/7/2018 04:18 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/13/2018 12:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2300	4.6	250		mg/L	500	6/13/2018 12:22 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	3.3	0.032	0.50		mg/L	5	6/7/2018 05:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	6/13/2018 12:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-005

Client Sample ID: CW-03M-LF-Q218
Collection Date: 6/5/2018 1:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2300	4.6	250		mg/L	500	6/13/2018 01:24 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	3.4	0.032	0.50		mg/L	5	6/7/2018 03:47 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	6/13/2018 01:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-006

Client Sample ID: CW-04D-3V-Q218
Collection Date: 6/5/2018 10:40:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 01:54 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.8	0.013	0.20		mg/L	2	6/7/2018 05:34 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/13/2018 02:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-007

Client Sample ID: CW-04D-LF-Q218
Collection Date: 6/5/2018 9:27:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 02:25 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180607A** QC Batch: **R124522**				PrepDate			Analyst: **RAB**
Fluoride	2.7	0.013	0.20		mg/L	2	6/7/2018 05:50 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	470	1.1	25		mg/L	50	6/13/2018 02:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 02:55 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.032	0.50		mg/L	5	6/8/2018 06:57 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/13/2018 03:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030646
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030646-009

Client Sample ID: CW-04M-LF-Q218
Collection Date: 6/5/2018 9:32:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 03:26 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.032	0.50		mg/L	5	6/8/2018 07:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/13/2018 03:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R124626_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	PBW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053110

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R124626_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	LCSW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053111

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.117	0.50	2.000	0	106	90	110				

Sample ID	N030646-004DMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3319.500	250	1000	2283	104	80	120				

Sample ID	N030646-004DMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053126

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3311.100	250	1000	2283	103	80	120	3320	0.253	20	

Sample ID	N030646-009DDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053127

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2075.100	250						2052	1.11	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	N030668-001CMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2559.300	250	1000	1596	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	MB-R124522_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	PBW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047468

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	LCS-R124522_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	LCSW	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047469

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.259	0.10	1.250	0	101	90	110				

Sample ID	N030627-001DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047478

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.640	0.50	6.250	2.386	100	80	120				

Sample ID	N030627-001DMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.674	0.50	6.250	2.386	101	80	120	8.640	0.399	20	

Sample ID	N030646-005DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.487	0.50	6.250	3.412	97.2	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N030646-003DDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124522
Client ID:	ZZZZZZ	Batch ID:	R124522	TestNo:	EPA 300.0			Analysis Date:	6/7/2018	SeqNo:	3047485

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.306	0.20						2.311	0.208	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	LCS-R124561_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	LCSW	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049817

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.230	0.10	1.250	0	98.4	90	110				

Sample ID	MB-R124561_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	PBW	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	N030668-005DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.123	0.50	6.250	3.010	97.8	80	120				

Sample ID	N030668-005DMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049821

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.171	0.50	6.250	3.010	98.6	80	120	9.122	0.525	20	

Sample ID	N030646-008DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049825

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.097	0.50	6.250	2.013	97.3	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N030668-001CDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049827

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.547	0.50						1.544	0.129	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R124626_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	PBW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053143

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID	LCS-R124626_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	LCSW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053144

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.756	0.50	4.000	0	93.9	90	110				

Sample ID	N030646-006DMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	668.250	25	200.0	469.0	99.6	80	120				

Sample ID	N030646-006DMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	667.365	25	200.0	469.0	99.2	80	120	668.2	0.133	20	

Sample ID	N030646-009DDUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053160

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	485.230	25						479.7	1.16	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	N030668-001CMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053162

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	538.035	25	200.0	345.4	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	3.0	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.5	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.5	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.3	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.5	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180614C**	QC Batch: **R124644**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.8	0.16	0.25		mg/L	5	6/14/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 4500N03F_W

Sample ID	MB-R124644	SampType:	MBLK	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	PBW	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054460

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	ND	0.050									

Sample ID	LCS-R124644	SampType:	LCS	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	LCSW	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054461

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	0.466	0.050	0.5000	0	93.3	85	115				

Sample ID	N030627-003EDUP	SampType:	DUP	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054465

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	2.506	0.25						2.791	10.8	20	

Sample ID	N030627-004EMS	SampType:	MS	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054467

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	4.369	0.25	2.500	1.687	107	75	125				

Sample ID	N030627-004EMSD	SampType:	MSD	TestCode:	4500N03F_W	Units:	mg/L	Prep Date:		RunNo:	124644
Client ID:	ZZZZZZ	Batch ID:	R124644	TestNo:	SM4500-NO3			Analysis Date:	6/14/2018	SeqNo:	3054468

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	4.365	0.25	2.500	1.687	107	75	125	4.368	0.0802	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/7/2018 10:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	39	18	20		ug/L	1	6/7/2018 11:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:12:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	45	18	20		ug/L	1	6/7/2018 11:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	110	18	20		ug/L	1	6/7/2018 11:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 1:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	270	18	20		ug/L	1	6/7/2018 11:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/7/2018 11:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:27:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	260	18	20		ug/L	1	6/7/2018 11:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 10:10:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**			PrepDate	**6/6/2018**		Analyst: **CEI**
Iron	53	18	20		ug/L	1	6/7/2018 11:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q218
Lab Order:	N030646	**Collection Date:**	6/5/2018 9:32:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030646-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_180607F**	QC Batch: **68332**				PrepDate	**6/6/2018**	Analyst: **CEI**
Iron	330	18	20		ug/L	1	6/8/2018 12:01 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030646
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	**MB-68332**	SampType:	**MBLK**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/6/2018**	RunNo:	**124525**
Client ID:	**PBW**	Batch ID:	**68332**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/7/2018**	SeqNo:	**3049424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID	**LCS-68332**	SampType:	**LCS**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/6/2018**	RunNo:	**124525**
Client ID:	**LCSW**	Batch ID:	**68332**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/7/2018**	SeqNo:	**3049427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	99.888	20	100.0	0	99.9	85	115				

Sample ID	**N030646-001F-MS**	SampType:	**MS**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/6/2018**	RunNo:	**124525**
Client ID:	**ZZZZZZ**	Batch ID:	**68332**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/7/2018**	SeqNo:	**3049436**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	101.915	20	100.0	0	102	75	125				

Sample ID	**N030646-001F-MSD**	SampType:	**MSD**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/6/2018**	RunNo:	**124525**
Client ID:	**ZZZZZZ**	Batch ID:	**68332**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/7/2018**	SeqNo:	**3049439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	102.400	20	100.0	0	102	75	125	101.9	0.474	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CHAIN OF CUSTODY RECORD

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID:
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Sample Receipt Condition: Y / N — 1. Chilled ✓; 2. Headspace; 3. Container Intact ✓; 4. Seal Present ✓; 5. IR number 2; 6. Method of Cooling: ICE
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	Sample Temp.: 3.3°C / 2.7°C / 2.1°C
Submitted By: Jason Mahn	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	
Title: Project Manager	Sampled By: Jason Mahn		
Signature: Date: 6/5/18	*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for*		
I hereby authorize ASSET Labs to perform the tests indicated below.	Signature: Date: 6/5/18		
Project Name: PG&E Topock - CMP			
Project Number: RC000753.801D			

Matrix: Groundwater x; Potable; NPDES; Surface; Sediment x; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH (250 mL poly)	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 (1 L poly)	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn (1 L poly)	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo (1 L poly)	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na (1 L poly)	Dissolved metals (EPA 245.1); HNO3 Mercury (1 L poly)	Anions (E300.0); Chloride, Fluoride, Sulfate (1 liter poly)	Specific Conductance (E120.1) (1 liter poly)	pH (SM4500HB) (1 liter poly)	TDS (SM2540C) (1 liter poly)	Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly)	Turbidity (SM2130B) (1 liter poly)	Nitrate/Nitrite as Nitrogen (SM4500N03); H2SO4 (125 mL poly)	Total metals (SW6010B); HNO3 Fe (500 mL poly)	Dissolved metals (EPA200.7) FF; HNO3 Na (1 L poly)					Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N030646-01	CW-03D-3V-Q218	6/5/2018	1430		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
2	-02	MW-902-Q218	6/5/2018	1440		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
3	-03	CW-03D-LF-Q218	6/5/2018	1312		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
4	-04	CW-03M-3V-Q218	6/5/2018	1418		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
5	-05	CW-03M-LF-Q218	6/5/2018	1310		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
6	-06	CW-04D-3V-Q218	6/5/2018	1040		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
7	-07	CW-04D-LF-Q218	6/5/2018	0927		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
8	-08	CW-04M-3V-Q218	6/5/2018	1010		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
9	-09	CW-04M-LF-Q218	6/5/2018	0932		X	X	X	X	X	X	X	X		X	X	X	X	X							E	6	P	BNSC	
10	-10	MW-727-Q218	6/5/2018	1450		X																				E	1	P	BC	

Courier:
Tracking No.:

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	6/5/18 16:00		6/5/18 16:00
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	6/5/18 17:45		6/5/18 17:45
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
	C	= 2 Workdays
	D	= 3 Workdays
X	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs =200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Jason Mahn		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact ✓
Title: Project Manager	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 6/5/18	Sampled By: Jason Mahn		Global ID:	Regulatory	5. IR number 2
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - CMP	Signature: Date: 6/5/18				Sample Temp: 3.3°C / 2.7°C / 2.1°C
Project Number: RC000753.801D					Courier: Tracking No.:

Matrix: Ground-water x | Potable | NPDES | Surface; Sediment | Soil | Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH (250 mL poly)	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 (1 L poly)	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn (1 L poly)	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo (1 L poly)	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na, (1 L poly)	Dissolved metals (EPA 245.1); HNO3 Mercury (1 L poly)	Anions (E300.0); Chloride, Fluoride, Sulfate (1 liter poly)	Specific Conductance (E120.1) (1 liter poly)	pH (SM4500HB) (1 liter poly)	TDS (SM2540C) (1 liter poly)	Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly)	Turbidity (SM2130B) (1 liter poly)	Nitrate/Nitrite as Nitrogen (SM4500N03); H2SO4 (125 mL poly)	Total metals (SW6010B); HNO3 Fe (500 mL poly)	Dissolved metals (EPA200.7) FF; HNO3 Na (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N030646-11	MW-728-Q218	6/5/2018	1430		X															E	1	P	BC	
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									

Relinquished by (Signature and Printed Name): Date/Time: 6/5/18 16:00
Received by (Signature and Printed Name): Date/Time: 6/5/18 16:00
Relinquished by (Signature and Printed Name): Date/Time: 6/5/18 17:45
Received by (Signature and Printed Name): Date/Time: 6/5/18 17:45
Relinquished by (Signature and Printed Name): Date/Time:
Received by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	6/5/2018	Workorder:	N030646
Rep sample Temp (Deg C):	3.3/2.7/2.1	IR Gun ID:	2

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

For:

Checklist Completed By: DA 6/8/2018

Reviewed By: LR 6/9/2018

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-001A	CW-03D-3V-Q218	6/5/2018 2:30:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-001B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-001C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-001D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-001E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-001F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-002A	MW-902-Q218	6/5/2018 2:40:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-002B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-002C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-002D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-002E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-002F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-003A	CW-03D-LF-Q218	6/5/2018 1:12:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-003B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-003C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-003D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-003E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-003F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-004A	CW-03M-3V-Q218	6/5/2018 2:18:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-004B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-004C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-004D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-004E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-004F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-005A	CW-03M-LF-Q218	6/5/2018 1:10:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-005B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-005C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-005D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-005E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-005F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-006A	CW-04D-3V-Q218	6/5/2018 10:40:00 AM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-006B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-006C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-006D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-006E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-006F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-007A	CW-04D-LF-Q218	6/5/2018 9:27:00 AM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-007B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-007C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-007D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-007E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-007F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-008A	CW-04M-3V-Q218	6/5/2018 10:10:00 AM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-008B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-008C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-008D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-008E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-008F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-009A	CW-04M-LF-Q218	6/5/2018 9:32:00 AM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-009B			6/19/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030646-009C			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/19/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/19/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/19/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/19/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030646-009D			6/19/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			6/19/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			6/19/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			6/19/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			6/19/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			6/19/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N030646-009E			6/19/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030646-009F			6/19/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/19/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

06-Jun-18

WorkOrder: N030646

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/5/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030646-010A	MW-727-Q218	6/5/2018 2:50:00 PM	6/19/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-011A	MW-728-Q218	6/5/2018 2:30:00 PM	6/19/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030646-012A	FOLDER	6/19/2018	6/19/2018		EDD	RWQCB	☐	☐	☐	LAB
			6/19/2018		Folder	Folder	☐	☐	☐	LAB
			6/19/2018		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Jason Mahn

06-Jun-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM4500-NH3D		
N030646-001B / CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	8OZP	1		
N030646-002B / MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	8OZP	1		
N030646-003B / CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	8OZP	1		
N030646-004B / CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	8OZP	1		
N030646-005B / CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	8OZP	1		
N030646-006B / CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	8OZP	1		
N030646-007B / CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	8OZP	1		
N030646-008B / CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	8OZP	1		
N030646-009B / CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	8OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N30646A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Ammonia by SM4500NH3D. EDD Requirement Labspec7 edata.

GSO #: 540858618

		Date/Time		Date/Time
Relinquished by:		6/6/2018 17:00	**Received by:**	
Relinquished by:			**Received by:**	

nancy@assetlaboratories.com

From: nancy@assetlaboratories.com
Sent: Wednesday, June 13, 2018 9:01 AM
To: 'Daniel Moore'
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Thank you Dan!

From: Daniel Moore [mailto:Daniel.Moore@critigen.com]
Sent: Wednesday, June 13, 2018 9:00 AM
To: nancy@assetlaboratories.com
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Please report.

Thanks!
Dan

From: nancy@assetlaboratories.com <nancy@assetlaboratories.com>
Sent: Wednesday, June 13, 2018 10:59 AM
To: Daniel Moore <Daniel.Moore@critigen.com>
Cc: 'Marlon B. Cartin' <marlon@assetlaboratories.com>
Subject: RE: N030627 & N030646 for EPA 200.8

Hi Dan,

Beryllium on PS is biased high @ 125.3% (80-120% criteria). However, it passed on MS/MSD @ 118 and 120%, respectively.

Thanks,
Nancy

From: Daniel Moore [mailto:Daniel.Moore@critigen.com]
Sent: Wednesday, June 13, 2018 8:24 AM
To: nancy@assetlaboratories.com
Cc: 'Marlon B. Cartin'
Subject: RE: N030627 & N030646 for EPA 200.8

Hi Nancy

What do the recoveries look like in the PS and MS/MSD? I am assuming they pass, if that is the case, please fill out a CA and report

---

From: nancy@assetlaboratories.com <nancy@assetlaboratories.com>
Sent: Tuesday, June 12, 2018 4:21 PM
To: Daniel Moore <Daniel.Moore@critigen.com>
Cc: 'Marlon B. Cartin' <marlon@assetlaboratories.com>

Subject: N030627 & N030646 for EPA 200.8
Importance: High

Hi Dan,

We are having issues on the internal standard(IS) of Beryllium on CCB5 being low biased at 66.7%. Affected by the CCB5 are the MB, PS, MS/MSD and sample N030627-001. The IS of Be on MB passed at 85.8% and Beryllium on samples & MB are all non-detect(ND).
All other instrument QCs passed for the required analytes.

So, can we also report Beryllium on this run? Please advise.

Thanks,
Nancy

Date of Report: 06/14/2018

Marlon Cartin

ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	[none]
BCL Project:	Level IV
BCL Work Order:	1818031
Invoice ID:	B306892

Enclosed are the results of analyses for samples received by the laboratory on 6/7/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

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Chain of Custody and Cooler Receipt Form for 1818031 Page 1 of 2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

18-18031

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.alt-labs.com
TEL: 7023072659 FAX: 7023072691

QC Level: Level IV

Field Sampler: Jason Mahn

06-Jun-18

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM4500-NH3D	
-1	N030646-001B / CW-03D-3V-Q218	Groundwater	6/5/2018 2:30:00 PM	8OZP	1	
-2	N030646-002B / MW-902-Q218	Groundwater	6/5/2018 2:40:00 PM	8OZP	1	
-3	N030646-003B / CW-03D-LF-Q218	Groundwater	6/5/2018 1:12:00 PM	8OZP	1	
-4	N030646-004B / CW-03M-3V-Q218	Groundwater	6/5/2018 2:18:00 PM	8OZP	1	
-5	N030646-005B / CW-03M-LF-Q218	Groundwater	6/5/2018 1:10:00 PM	8OZP	1	
-6	N030646-006B / CW-04D-3V-Q218	Groundwater	6/5/2018 10:40:00 AM	8OZP	1	
-7	N030646-007B / CW-04D-LF-Q218	Groundwater	6/5/2018 9:27:00 AM	8OZP	1	
-8	N030646-008B / CW-04M-3V-Q218	Groundwater	6/5/2018 10:10:00 AM	8OZP	1	
-9	N030646-009B / CW-04M-LF-Q218	Groundwater	6/5/2018 9:32:00 AM	8OZP	1	

CHK BY DISTRIBUTION SUB-OUT

General Comments: Please email sample receipt acknowledgement to the PM.
Please use PO#:N30646A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.
Please analyze for Ammonia by SM4500NH3D. EDD Requirement Labspec7 edata.

GSO #: 540858618

	Date/Time		Date/Time
Relinquished by:	6/6/2018 17:00	Received by:	6.7.18 10:30
Relinquished by:		Received by:	

Chain of Custody and Cooler Receipt Form for 1818031 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-181031

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GSO	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: Pipe Thermometer ID: 374 Date/Time 6-7-18

Temperature: (A) 0.0 °C / (C) 0.8 °C Analyst Init 10:30

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A	A	A	A	A	A	
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By:

A = Actual / C = Corrected

Date/Time: 6/7/18 1753

Rev 21 05/23/2018

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1818031-01	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 14:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-001B / CW-O3D-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-02	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 14:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-002B / MW-902-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-03	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 13:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-003B / CW-03D-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-04	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 14:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-004B / CW-03M-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-05	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 13:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-005B / CW-O3M-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-06	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-006B / CW-04D-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-07	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 09:27
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-007B / CW-04D-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1818031-08	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 10:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-008B / CW-04M-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1818031-09	**COC Number:**	---	**Receive Date:**	06/07/2018 10:30
	Project Number:	---	**Sampling Date:**	06/05/2018 09:32
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030646-009B / CW-04M-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-01 | **Client Sample Name:** N030646-001B / CW-O3D-3V-Q218, 6/5/2018 2:30:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:38	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-02 | **Client Sample Name:** N030646-002B / MW-902-Q218, 6/5/2018 2:40:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:38	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-03 | **Client Sample Name:** N030646-003B / CW-03D-LF-Q218, 6/5/2018 1:12:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:40	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-04 | **Client Sample Name:** N030646-004B / CW-03M-3V-Q218, 6/5/2018 2:18:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/12/18 09:04	06/13/18 16:40	JMH	SC-1	1	B016368

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-05 | **Client Sample Name:** N030646-005B / CW-O3M-LF-Q218, 6/5/2018 1:10:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	**0.22**	**mg/L**	**0.20**		**SM-4500-NH3G**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:49	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-06 | **Client Sample Name:** N030646-006B / CW-04D-3V-Q218, 6/5/2018 10:40:00AM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:49	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-07 | **Client Sample Name:** N030646-007B / CW-04D-LF-Q218, 6/5/2018 9:27:00AM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:50	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-08 | **Client Sample Name:** N030646-008B / CW-04M-3V-Q218, 6/5/2018 10:10:00AM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:51	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818031-09 | **Client Sample Name:** N030646-009B / CW-04M-LF-Q218, 6/5/2018 9:32:00AM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:52	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B016368						
Ammonia as N (Distilled)	B016368-BLK1	ND	mg/L	0.20		
QC Batch ID: B016462						
Ammonia as N (Distilled)	B016462-BLK1	ND	mg/L	0.20		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B016368										
Ammonia as N (Distilled)	B016368-BS1	LCS	0.97570	1.0000	mg/L	97.6		85 - 115		
QC Batch ID: B016462										
Ammonia as N (Distilled)	B016462-BS1	LCS	0.97180	1.0000	mg/L	97.2		85 - 115		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B016368	Used client sample: N										
Ammonia as N (Distilled)	DUP	1817953-02	0.27270	0.32460		mg/L	17.4		20		
	MS	1817953-02	0.27270	1.2497	1.0000	mg/L		97.7		80 - 120	
	MSD	1817953-02	0.27270	1.2289	1.0000	mg/L	1.7	95.6	20	80 - 120	
QC Batch ID: B016462	Used client sample: N										
Ammonia as N (Distilled)	DUP	1817953-03	0.61480	0.53820		mg/L	13.3		20		
	MS	1817953-03	0.61480	1.6359	1.0000	mg/L		102		80 - 120	
	MSD	1817953-03	0.61480	1.5295	1.0000	mg/L	6.7	91.5	20	80 - 120	

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 12:08
Project: Level IV
Project Number: [none]
Project Manager: Marlon Cartin

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

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June 22, 2018

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661
TEL: (916) 786-3302
FAX:

Workorder No.: N030668

RE: PG&E Topock - CMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on June 06, 2018 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Liburdi for

Quennie Manimtim
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N030668-003C-MS1 and N030668-003C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N030668-001B-MS2 and N030668-001B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Because the results for total dissolved chromium (2.8 ug/L) and hexavalent chromium (0.49 ug/L) for sample N030668-010 (OW-05M-LF-Q218) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.5 and 1.4 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Zinc in QC samples N030668-001B-MS and N030668-001B-MSD possibly due to matrix interference. The

associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (2.8 ug/L) and hexavalent chromium (0.49 ug/L) for sample N030668-010 (OW-05M-LF-Q218) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 245.1_Dissolved:

Matrix Spike (MS) is outside recovery criteria in QC sample N030668-011C-MS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Dilution was necessary for samples N030668-001, -002 and -005 due to precipitation upon the addition of eluent.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N030668
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030668-001A	OW-05S-3V-Q218	Groundwater	6/6/2018 12:37:00 PM	6/6/2018	6/22/2018
N030668-001B	OW-05S-3V-Q218	Groundwater	6/6/2018 12:37:00 PM	6/6/2018	6/22/2018
N030668-001C	OW-05S-3V-Q218	Groundwater	6/6/2018 12:37:00 PM	6/6/2018	6/22/2018
N030668-001D	OW-05S-3V-Q218	Groundwater	6/6/2018 12:37:00 PM	6/6/2018	6/22/2018
N030668-002A	OW-05S-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-002B	OW-05S-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-002C	OW-05S-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-002D	OW-05S-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-003A	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-003B	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-003C	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-003D	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-003E	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-003F	CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	6/6/2018	6/22/2018
N030668-004A	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-004B	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-004C	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-004D	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-004E	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-004F	CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	6/6/2018	6/22/2018
N030668-005A	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-005B	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-005C	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-005D	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-005E	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-005F	CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	6/6/2018	6/22/2018
N030668-006A	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018
N030668-006B	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018
N030668-006C	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N030668
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N030668-006D	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018
N030668-006E	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018
N030668-006F	CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	6/6/2018	6/22/2018
N030668-007A	MW-729-Q218	Groundwater	6/6/2018 12:50:00 PM	6/6/2018	6/22/2018
N030668-008A	MW-730-Q218	Groundwater	6/6/2018 1:30:00 PM	6/6/2018	6/22/2018
N030668-009A	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-009B	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-009C	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-009D	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-009E	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-009F	OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	6/6/2018	6/22/2018
N030668-010A	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-010B	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-010C	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-010D	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-010E	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-010F	OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	6/6/2018	6/22/2018
N030668-011A	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018
N030668-011B	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018
N030668-011C	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018
N030668-011D	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018
N030668-011E	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018
N030668-011F	MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	6/6/2018	6/22/2018

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	4900	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	5200	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7100	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_180607A**	QC Batch: **R124526**			PrepDate			Analyst: **LR**
Specific Conductance	7000	0.10	0.10		umhos/cm	1	6/7/2018 10:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID	**N030668-004DDUP**	SampType:	**DUP**	TestCode:	**120.1_WPGE**	Units:	**umhos/cm**	Prep Date:		RunNo:	**124526**
Client ID:	**ZZZZZZ**	Batch ID:	**R124526**	TestNo:	**EPA 120.1**			Analysis Date:	**6/7/2018**	SeqNo:	**3047833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7170.000	0.10						7160	0.140	2	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3500	33	33		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180607D**	QC Batch: **68365**			PrepDate	**6/7/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/7/2018 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180611F**	QC Batch: **68415**			PrepDate	**6/11/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/11/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180611F**	QC Batch: **68415**			PrepDate	**6/11/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	6/11/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_180611F**	QC Batch: **68415**			PrepDate	**6/11/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	6/11/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-68365	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/7/2018	RunNo:	124532
Client ID:	LCSW	Batch ID:	68365	TestNo:	SM2540C			Analysis Date:	6/7/2018	SeqNo:	3048169

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	984.000	10	1000	0	98.4	80	120				

Sample ID	MB-68365	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/7/2018	RunNo:	124532
Client ID:	PBW	Batch ID:	68365	TestNo:	SM2540C			Analysis Date:	6/7/2018	SeqNo:	3048170

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N030645-001ADUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/7/2018	RunNo:	124532
Client ID:	ZZZZZZ	Batch ID:	68365	TestNo:	SM2540C			Analysis Date:	6/7/2018	SeqNo:	3048172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4240.000	50						4075	3.97	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-68415	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/11/2018	RunNo:	124614
Client ID:	LCSW	Batch ID:	68415	TestNo:	SM2540C			Analysis Date:	6/11/2018	SeqNo:	3052837

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	963.000	10	1000	0	96.3	80	120				

Sample ID	MB-68415	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/11/2018	RunNo:	124614
Client ID:	PBW	Batch ID:	68415	TestNo:	SM2540C			Analysis Date:	6/11/2018	SeqNo:	3052838

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N030686-002CDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	6/11/2018	RunNo:	124614
Client ID:	ZZZZZZ	Batch ID:	68415	TestNo:	SM2540C			Analysis Date:	6/11/2018	SeqNo:	3052844

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4170.000	50						4020	3.66	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 200.7							
RunID: **NV00922-ICP2_180620A**	QC Batch: **68349**				PrepDate	**6/7/2018**	Analyst: **CEI**
Sodium	670000	9600	50000		µg/L	100	6/20/2018 08:35 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 200.7							
RunID: **NV00922-ICP2_180620A**	QC Batch: **68349**				PrepDate	**6/7/2018**	Analyst: **CEI**
Sodium	620000	9600	50000		µg/L	100	6/20/2018 08:38 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-003

Client Sample ID: CW-02D-3V-Q218
Collection Date: 6/6/2018 9:40:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68349** PrepDate **6/7/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:21 AM
Boron	1000	74	100		µg/L	1	6/17/2018 08:32 PM
Calcium	100000	85	500		µg/L	1	6/17/2018 08:32 PM
Iron	ND	18	20		µg/L	1	6/17/2018 08:32 PM
Magnesium	5000	48	100		µg/L	1	6/17/2018 08:32 PM
Potassium	13000	85	500		µg/L	1	6/20/2018 10:45 AM
Sodium	1600000	9600	50000		µg/L	100	6/20/2018 08:41 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-004

Client Sample ID: CW-02D-LF-Q218
Collection Date: 6/6/2018 8:15:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68349** PrepDate **6/7/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:38 AM
Boron	1000	74	100		µg/L	1	6/17/2018 09:15 PM
Calcium	96000	85	500		µg/L	1	6/17/2018 09:15 PM
Iron	ND	18	20		µg/L	1	6/17/2018 09:15 PM
Magnesium	4700	48	100		µg/L	1	6/17/2018 09:15 PM
Potassium	12000	85	500		µg/L	1	6/20/2018 10:50 AM
Sodium	1500000	9600	50000		µg/L	100	6/20/2018 08:44 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-005

Client Sample ID: CW-02M-3V-Q218
Collection Date: 6/6/2018 9:12:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68349** PrepDate **6/7/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:48 AM
Boron	1100	74	100		µg/L	1	6/17/2018 10:04 PM
Calcium	140000	85	500		µg/L	1	6/17/2018 10:04 PM
Iron	36	18	20		µg/L	1	6/17/2018 10:04 PM
Magnesium	9300	48	100		µg/L	1	6/17/2018 10:04 PM
Potassium	13000	85	500		µg/L	1	6/20/2018 10:55 AM
Sodium	1500000	9600	50000		µg/L	100	6/20/2018 08:48 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-006

Client Sample ID: CW-02M-LF-Q218
Collection Date: 6/6/2018 8:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68349**				PrepDate	**6/7/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:51 AM
Boron	1100	74	100		µg/L	1	6/17/2018 10:13 PM
Calcium	140000	85	500		µg/L	1	6/17/2018 10:13 PM
Iron	22	18	20		µg/L	1	6/17/2018 10:13 PM
Magnesium	9100	48	100		µg/L	1	6/17/2018 10:13 PM
Potassium	13000	85	500		µg/L	1	6/20/2018 11:00 AM
Sodium	1500000	9600	50000		µg/L	100	6/20/2018 08:51 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-009

Client Sample ID: OW-05M-3V-Q218
Collection Date: 6/6/2018 1:00:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_180618A** QC Batch: **68349** PrepDate **6/7/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:55 AM
Boron	1100	74	100		µg/L	1	6/17/2018 10:23 PM
Calcium	150000	85	500		µg/L	1	6/17/2018 10:23 PM
Iron	ND	18	20		µg/L	1	6/17/2018 10:23 PM
Magnesium	23000	48	100		µg/L	1	6/17/2018 10:23 PM
Potassium	15000	85	500		µg/L	1	6/20/2018 11:06 AM
Sodium	1500000	9600	50000		µg/L	100	6/20/2018 08:54 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68349**				PrepDate	**6/7/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 10:58 AM
Boron	1000	74	100		µg/L	1	6/17/2018 10:31 PM
Calcium	150000	85	500		µg/L	1	6/17/2018 10:31 PM
Iron	29	18	20		µg/L	1	6/17/2018 10:31 PM
Magnesium	22000	48	100		µg/L	1	6/17/2018 10:31 PM
Potassium	15000	85	500		µg/L	1	6/20/2018 11:18 AM
Sodium	1400000	9600	50000		µg/L	100	6/20/2018 08:58 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-011

Client Sample ID: MW-903-Q218
Collection Date: 6/6/2018 12:18:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_180618A**	QC Batch: **68349**				PrepDate	**6/7/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	6/18/2018 11:01 AM
Boron	1000	74	100		µg/L	1	6/17/2018 10:40 PM
Calcium	150000	85	500		µg/L	1	6/17/2018 10:40 PM
Iron	ND	18	20		µg/L	1	6/17/2018 10:40 PM
Magnesium	23000	48	100		µg/L	1	6/17/2018 10:40 PM
Potassium	15000	85	500		µg/L	1	6/20/2018 11:23 AM
Sodium	1400000	9600	50000		µg/L	100	6/20/2018 09:08 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **MB-68349**	SampType: **MBLK**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124692**
Client ID: **PBW**	Batch ID: **68349**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056550**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID **LCS1-68349**	SampType: **LCS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124692**
Client ID: **LCSW**	Batch ID: **68349**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	4725.816	100	5000	0	94.5	85	115				
Calcium	9467.096	500	10000	0	94.7	85	115				
Iron	104.273	20	100.0	0	104	85	115				
Magnesium	9612.983	100	10000	0	96.1	85	115				

Sample ID **N030668-003C-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68349**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056555**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5825.930	100	5000	1039	95.7	75	125				
Calcium	120539.585	500	10000	102200	184	75	125				S
Iron	101.234	20	100.0	0	101	75	125				
Magnesium	13048.954	100	10000	4967	80.8	75	125				

Sample ID **N030668-003C-MSD**	SampType: **MSD**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124692**
Client ID: **ZZZZZZ**	Batch ID: **68349**	TestNo: **EPA 200.7**		Analysis Date: **6/17/2018**	SeqNo: **3056556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5857.670	100	5000	1039	96.4	75	125	5826	0.543	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030668-003C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	124692	
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/17/2018	SeqNo:	3056556	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Calcium	121781.433	500	10000	102200	196	75	125	120500	1.02	20	S	
Iron	101.799	20	100.0	0	102	75	125	101.2	0.557	20		
Magnesium	13096.516	100	10000	4967	81.3	75	125	13050	0.364	20		

Sample ID	MB-68349	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	124694	
Client ID:	PBW	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056694	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	ND	50										

Sample ID	LCS1-68349	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	124694	
Client ID:	LCSW	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056695	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10062.971	50	10000	0	101	85	115					

Sample ID	N030668-003C-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	124694	
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056699	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10280.788	50	10000	0	103	75	125					

Sample ID	N030668-003C-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	124694	
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/18/2018	SeqNo:	3056700	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10344.328	50	10000	0	103	75	125	10280	0.616	20		

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	MB-68349	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	PBW	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Sample ID	LCS2-68349	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	LCSW	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059920

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19299.111	500	20000	0	96.5	85	115				
Sodium	18924.674	500	20000	0	94.6	85	115				

Sample ID	N030668-001B-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059934

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	662223.149	50000	20000	665300	-15.3	75	125				S

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059935

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	658479.165	50000	20000	665300	-34.0	75	125	662200	0.567	20	S

Sample ID	N030668-001B-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059966

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	40870.062	2500	20000	16430	122	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	6/7/2018	RunNo:	125741
Client ID:	ZZZZZZ	Batch ID:	68349	TestNo:	EPA 200.7			Analysis Date:	6/20/2018	SeqNo:	3059967

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	40821.683	2500	20000	16430	122	75	125	40870	0.118	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_180618C** QC Batch: **68369** PrepDate **6/8/2018** Analyst: **CEI**							
Molybdenum	11	0.21	0.50		µg/L	1	6/18/2018 09:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Molybdenum	9.2	0.21	0.50		µg/L	1	6/18/2018 10:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**				PrepDate	**6/8/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	6/18/2018 11:03 PM
Arsenic	3.0	0.081	0.10		µg/L	1	6/18/2018 11:03 PM
Barium	15	0.15	1.0		µg/L	1	6/18/2018 11:03 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/18/2018 11:03 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/18/2018 11:03 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/18/2018 11:03 PM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 03:59 PM
Lead	ND	0.13	1.0		µg/L	1	6/18/2018 11:03 PM
Manganese	1.8	0.26	0.50		µg/L	1	6/18/2018 11:03 PM
Molybdenum	12	0.21	0.50		µg/L	1	6/18/2018 11:03 PM
Nickel	6.9	0.26	1.0		µg/L	1	6/21/2018 03:59 PM
Selenium	4.0	0.36	0.50		µg/L	1	6/18/2018 11:03 PM
Silver	ND	0.23	0.50		µg/L	1	6/18/2018 11:03 PM
Thallium	ND	0.19	0.50		µg/L	1	6/18/2018 11:03 PM
Vanadium	4.1	0.28	1.0		µg/L	1	6/18/2018 11:03 PM
Zinc	12	2.3	10		µg/L	1	6/18/2018 11:03 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180618C** QC Batch: **68369** PrepDate **6/8/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/18/2018 11:23 PM
Arsenic	3.0	0.081	0.10		µg/L	1	6/18/2018 11:23 PM
Barium	15	0.15	1.0		µg/L	1	6/18/2018 11:23 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/18/2018 11:23 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/18/2018 11:23 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/18/2018 11:23 PM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 03:23 PM
Lead	ND	0.13	1.0		µg/L	1	6/18/2018 11:23 PM
Manganese	1.8	0.26	0.50		µg/L	1	6/18/2018 11:23 PM
Molybdenum	13	0.21	0.50		µg/L	1	6/18/2018 11:23 PM
Nickel	1.6	0.26	1.0		µg/L	1	6/21/2018 03:23 PM
Selenium	3.7	0.36	0.50		µg/L	1	6/18/2018 11:23 PM
Silver	ND	0.23	0.50		µg/L	1	6/18/2018 11:23 PM
Thallium	ND	0.19	0.50		µg/L	1	6/18/2018 11:23 PM
Vanadium	4.2	0.28	1.0		µg/L	1	6/18/2018 11:23 PM
Zinc	ND	2.3	10		µg/L	1	6/18/2018 11:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**				PrepDate	**6/8/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	6/18/2018 11:34 PM
Arsenic	1.8	0.081	0.10		µg/L	1	6/18/2018 11:34 PM
Barium	68	0.15	1.0		µg/L	1	6/18/2018 11:34 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/18/2018 11:34 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/18/2018 11:34 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/18/2018 11:34 PM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 04:05 PM
Lead	ND	0.13	1.0		µg/L	1	6/18/2018 11:34 PM
Manganese	1.4	0.26	0.50		µg/L	1	6/18/2018 11:34 PM
Molybdenum	15	0.21	0.50		µg/L	1	6/18/2018 11:34 PM
Nickel	1.6	0.26	1.0		µg/L	1	6/21/2018 04:05 PM
Selenium	3.6	0.36	0.50		µg/L	1	6/18/2018 11:34 PM
Silver	ND	0.23	0.50		µg/L	1	6/18/2018 11:34 PM
Thallium	ND	0.19	0.50		µg/L	1	6/18/2018 11:34 PM
Vanadium	3.6	0.28	1.0		µg/L	1	6/18/2018 11:34 PM
Zinc	ND	2.3	10		µg/L	1	6/18/2018 11:34 PM

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-006

Client Sample ID: CW-02M-LF-Q218
Collection Date: 6/6/2018 8:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**				PrepDate	**6/8/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	6/18/2018 11:45 PM
Arsenic	1.9	0.081	0.10		µg/L	1	6/18/2018 11:45 PM
Barium	68	0.15	1.0		µg/L	1	6/18/2018 11:45 PM
Beryllium	ND	0.042	0.50		µg/L	1	6/18/2018 11:45 PM
Cadmium	ND	0.053	0.50		µg/L	1	6/18/2018 11:45 PM
Cobalt	ND	0.042	0.50		µg/L	1	6/18/2018 11:45 PM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 03:35 PM
Lead	ND	0.13	1.0		µg/L	1	6/18/2018 11:45 PM
Manganese	1.4	0.26	0.50		µg/L	1	6/18/2018 11:45 PM
Molybdenum	16	0.21	0.50		µg/L	1	6/18/2018 11:45 PM
Nickel	ND	0.26	1.0		µg/L	1	6/21/2018 03:35 PM
Selenium	3.8	0.36	0.50		µg/L	1	6/18/2018 11:45 PM
Silver	ND	0.23	0.50		µg/L	1	6/18/2018 11:45 PM
Thallium	ND	0.19	0.50		µg/L	1	6/18/2018 11:45 PM
Vanadium	3.8	0.28	1.0		µg/L	1	6/18/2018 11:45 PM
Zinc	ND	2.3	10		µg/L	1	6/18/2018 11:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-009

Client Sample ID: OW-05M-3V-Q218
Collection Date: 6/6/2018 1:00:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180618C** QC Batch: **68369** PrepDate **6/8/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/19/2018 12:07 AM
Arsenic	0.86	0.081	0.10		µg/L	1	6/19/2018 12:07 AM
Barium	39	0.15	1.0		µg/L	1	6/19/2018 12:07 AM
Beryllium	ND	0.042	0.50		µg/L	1	6/19/2018 12:07 AM
Cadmium	ND	0.053	0.50		µg/L	1	6/19/2018 12:07 AM
Cobalt	ND	0.042	0.50		µg/L	1	6/19/2018 12:07 AM
Copper	2.4	0.55	1.0		µg/L	1	6/21/2018 03:40 PM
Lead	ND	0.13	1.0		µg/L	1	6/19/2018 12:07 AM
Manganese	ND	0.26	0.50		µg/L	1	6/19/2018 12:07 AM
Molybdenum	19	0.21	0.50		µg/L	1	6/19/2018 12:07 AM
Nickel	6.8	0.26	1.0		µg/L	1	6/21/2018 03:40 PM
Selenium	4.1	0.36	0.50		µg/L	1	6/19/2018 12:07 AM
Silver	ND	0.23	0.50		µg/L	1	6/19/2018 12:07 AM
Thallium	ND	0.19	0.50		µg/L	1	6/19/2018 12:07 AM
Vanadium	1.8	0.28	1.0		µg/L	1	6/19/2018 12:07 AM
Zinc	14	2.3	10		µg/L	1	6/19/2018 12:07 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-010

Client Sample ID: OW-05M-LF-Q218
Collection Date: 6/6/2018 12:08:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180618C** QC Batch: **68369** PrepDate **6/8/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/19/2018 12:19 AM
Arsenic	0.89	0.081	0.10		µg/L	1	6/19/2018 12:19 AM
Barium	40	0.15	1.0		µg/L	1	6/19/2018 12:19 AM
Beryllium	ND	0.042	0.50		µg/L	1	6/19/2018 12:19 AM
Cadmium	ND	0.053	0.50		µg/L	1	6/19/2018 12:19 AM
Cobalt	ND	0.042	0.50		µg/L	1	6/19/2018 12:19 AM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 03:46 PM
Lead	ND	0.13	1.0		µg/L	1	6/19/2018 12:19 AM
Manganese	2.1	0.26	0.50		µg/L	1	6/19/2018 12:19 AM
Molybdenum	21	0.21	0.50		µg/L	1	6/19/2018 12:19 AM
Nickel	3.8	0.26	1.0		µg/L	1	6/21/2018 03:46 PM
Selenium	4.2	0.36	0.50		µg/L	1	6/19/2018 12:19 AM
Silver	ND	0.23	0.50		µg/L	1	6/19/2018 12:19 AM
Thallium	ND	0.19	0.50		µg/L	1	6/19/2018 12:19 AM
Vanadium	1.7	0.28	1.0		µg/L	1	6/19/2018 12:19 AM
Zinc	ND	2.3	10		µg/L	1	6/19/2018 12:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-011

Client Sample ID: MW-903-Q218
Collection Date: 6/6/2018 12:18:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_180618C** QC Batch: **68369** PrepDate **6/8/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	6/19/2018 12:30 AM
Arsenic	0.76	0.081	0.10		µg/L	1	6/19/2018 12:30 AM
Barium	37	0.15	1.0		µg/L	1	6/19/2018 12:30 AM
Beryllium	ND	0.042	0.50		µg/L	1	6/19/2018 12:30 AM
Cadmium	ND	0.053	0.50		µg/L	1	6/19/2018 12:30 AM
Cobalt	ND	0.042	0.50		µg/L	1	6/19/2018 12:30 AM
Copper	ND	0.55	1.0		µg/L	1	6/21/2018 03:54 PM
Lead	1.2	0.13	1.0		µg/L	1	6/19/2018 12:30 AM
Manganese	ND	0.26	0.50		µg/L	1	6/19/2018 12:30 AM
Molybdenum	19	0.21	0.50		µg/L	1	6/19/2018 12:30 AM
Nickel	5.5	0.26	1.0		µg/L	1	6/21/2018 03:54 PM
Selenium	4.1	0.36	0.50		µg/L	1	6/19/2018 12:30 AM
Silver	ND	0.23	0.50		µg/L	1	6/19/2018 12:30 AM
Thallium	ND	0.19	0.50		µg/L	1	6/19/2018 12:30 AM
Vanadium	1.5	0.28	1.0		µg/L	1	6/19/2018 12:30 AM
Zinc	ND	2.3	10		µg/L	1	6/19/2018 12:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **MB-68369** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/8/2018** RunNo: **124728**
Client ID: **PBW** Batch ID: **68369** TestNo: **EPA 200.8** Analysis Date: **6/18/2018** SeqNo: **3058269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Barium	ND	1.0									
Beryllium	ND	0.50									
Cadmium	ND	0.50									
Cobalt	ND	0.50									
Lead	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Silver	ND	0.50									
Thallium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **LCS-68369** SampType: **LCS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **6/8/2018** RunNo: **124728**
Client ID: **LCSW** Batch ID: **68369** TestNo: **EPA 200.8** Analysis Date: **6/18/2018** SeqNo: **3058270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.108	0.50	10.00	0	101	85	115				
Arsenic	10.627	0.10	10.00	0	106	85	115				
Barium	10.675	1.0	10.00	0	107	85	115				
Beryllium	10.264	0.50	10.00	0	103	85	115				
Cadmium	10.946	0.50	10.00	0	109	85	115				
Cobalt	10.262	0.50	10.00	0	103	85	115				
Lead	10.402	1.0	10.00	0	104	85	115				
Manganese	106.104	0.50	100.0	0	106	85	115				
Molybdenum	10.431	0.50	10.00	0	104	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	LCS-68369	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	LCSW	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058270

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.910	0.50	10.00	0	99.1	85	115				
Silver	9.417	0.50	10.00	0	94.2	85	115				
Thallium	10.355	0.50	10.00	0	104	85	115				
Vanadium	10.596	1.0	10.00	0	106	85	115				
Zinc	10.161	10	10.00	0	102	85	115				

Sample ID	N030668-001B-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058276

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.213	0.50	10.00	0	102	75	125				
Arsenic	11.534	0.10	10.00	0.6517	109	75	125				
Barium	121.903	1.0	10.00	114.1	78.2	75	125				
Beryllium	11.503	0.50	10.00	0	115	75	125				
Cadmium	10.429	0.50	10.00	0	104	75	125				
Cobalt	9.180	0.50	10.00	0.2373	89.4	75	125				
Lead	12.863	1.0	10.00	2.865	100	75	125				
Manganese	93.089	0.50	100.0	0	93.1	75	125				
Molybdenum	22.703	0.50	10.00	11.04	117	75	125				
Selenium	13.352	0.50	10.00	2.793	106	75	125				
Silver	9.267	0.50	10.00	0	92.7	75	125				
Thallium	9.099	0.50	10.00	0	91.0	75	125				
Vanadium	12.622	1.0	10.00	2.368	103	75	125				
Zinc	146.520	10	100.0	0	147	75	125				S

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058278

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.201	0.50	10.00	0	102	75	125	10.21	0.122	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728	
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058278	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.402	0.10	10.00	0.6517	108	75	125	11.53	1.15	20	
Barium	122.063	1.0	10.00	114.1	79.8	75	125	121.9	0.131	20	
Beryllium	11.590	0.50	10.00	0	116	75	125	11.50	0.752	20	
Cadmium	10.607	0.50	10.00	0	106	75	125	10.43	1.70	20	
Cobalt	9.092	0.50	10.00	0.2373	88.5	75	125	9.180	0.965	20	
Lead	12.160	1.0	10.00	2.865	93.0	75	125	12.86	5.62	20	
Manganese	92.359	0.50	100.0	0	92.4	75	125	93.09	0.787	20	
Molybdenum	22.365	0.50	10.00	11.04	113	75	125	22.70	1.50	20	
Selenium	13.523	0.50	10.00	2.793	107	75	125	13.35	1.28	20	
Silver	9.373	0.50	10.00	0	93.7	75	125	9.267	1.14	20	
Thallium	8.949	0.50	10.00	0	89.5	75	125	9.099	1.66	20	
Vanadium	12.453	1.0	10.00	2.368	101	75	125	12.62	1.35	20	
Zinc	128.042	10	100.0	0	128	75	125	146.5	13.5	20	S

Sample ID	MB-68369	SampType:	MBLK	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	125785	
Client ID:	PBW	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/21/2018	SeqNo:	3061810	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	1.0									
Nickel	ND	1.0									

Sample ID	LCS-68369	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	125785	
Client ID:	LCSW	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/21/2018	SeqNo:	3061811	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.252	1.0	10.00	0	103	85	115				
Nickel	9.943	1.0	10.00	0	99.4	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N030668-001B-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	125785
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/21/2018	SeqNo:	3061815

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.435	1.0	10.00	0	104	75	125				
Nickel	10.018	1.0	10.00	0.6814	93.4	75	125				

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	125785
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/21/2018	SeqNo:	3061816

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	10.366	1.0	10.00	0	104	75	125	10.44	0.671	20	
Nickel	9.825	1.0	10.00	0.6814	91.4	75	125	10.02	1.94	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	9.6	0.066	0.40		µg/L	2	6/8/2018 04:30 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	10	0.13	1.0		µg/L	1	6/18/2018 09:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	8.2	0.033	0.20		µg/L	1	6/8/2018 12:24 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	8.4	0.13	1.0		µg/L	1	6/18/2018 10:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A** QC Batch: **R124569**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/8/2018 12:43 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C** QC Batch: **68369**				PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/18/2018 11:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-004

Client Sample ID: CW-02D-LF-Q218
Collection Date: 6/6/2018 8:15:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A** QC Batch: **R124569**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/8/2018 01:30 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C** QC Batch: **68369**				PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/18/2018 11:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.87	0.033	0.20		µg/L	1	6/8/2018 01:49 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	1.2	0.13	1.0		µg/L	1	6/18/2018 11:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-006

Client Sample ID: CW-02M-LF-Q218
Collection Date: 6/6/2018 8:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.84	0.033	0.20		µg/L	1	6/8/2018 02:08 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	1.2	0.13	1.0		µg/L	1	6/18/2018 11:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-729-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/8/2018 02:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-730-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:30:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	6/8/2018 02:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.60	0.033	0.20		µg/L	1	6/8/2018 04:55 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	6/19/2018 12:07 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.49	0.033	0.20		µg/L	1	6/8/2018 03:43 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	2.8	0.13	1.0		µg/L	1	6/19/2018 12:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-011

Client Sample ID: MW-903-Q218
Collection Date: 6/6/2018 12:18:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_180608A**	QC Batch: **R124569**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.48	0.033	0.20		µg/L	1	6/8/2018 04:02 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_180618C**	QC Batch: **68369**			PrepDate	**6/8/2018**		Analyst: **CEI**
Chromium	1.0	0.13	1.0		µg/L	1	6/19/2018 12:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_CrPGE

Sample ID	MB-68369	SampType:	MBLK	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	PBW	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	LCS-68369	SampType:	LCS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	LCSW	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.512	1.0	10.00	0	105	85	115				

Sample ID	N030668-001B-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058165

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.620	1.0	10.00	10.09	105	75	125				

Sample ID	N030668-001B-MSD	SampType:	MSD	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	6/8/2018	RunNo:	124728
Client ID:	ZZZZZZ	Batch ID:	68369	TestNo:	EPA 200.8			Analysis Date:	6/18/2018	SeqNo:	3058167

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.430	1.0	10.00	10.09	93.4	75	125	20.62	5.94	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R124569	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	PBW	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050167

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID	LCS-R124569	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	LCSW	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050168

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.118	0.20	5.000	0	102	90	110				

Sample ID	N030674-006ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050176

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.899	0.20						0.8980	0.145	20	

Sample ID	N030668-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050177

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	20.155	0.40	10.00	9.638	105	90	110				

Sample ID	N030668-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050179

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.451	0.20	5.000	8.171	106	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N030668-003AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050181

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.077	0.20	1.000	0.06270	101	90	110				

Sample ID	N030668-001AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050182

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	19.903	0.40	10.00	9.638	103	90	110	20.16	1.26	20	

Sample ID	N030668-004AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050186

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.051	0.20	1.000	0.06190	98.9	90	110				

Sample ID	N030668-005AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050188

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.894	0.20	1.000	0.8666	103	90	110				

Sample ID	N030668-007AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050191

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N030668-008AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050193

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.066	0.20	1.000	0	107	90	110				

Sample ID	N030668-009AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050196

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.604	0.20	1.000	0.5954	101	90	110				

Sample ID	N030668-010AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050198

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.534	0.20	1.000	0.4911	104	90	110				

Sample ID	N030668-011AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050200

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.501	0.20	1.000	0.4820	102	90	110				

Sample ID	N030668-006AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	124569
Client ID:	ZZZZZZ	Batch ID:	R124569	TestNo:	EPA 218.6			Analysis Date:	6/8/2018	SeqNo:	3050203

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.917	0.20	1.000	0.8352	108	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	0.78	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	1.8	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	0.47	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	0.53	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	0.79	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	1.4	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	0.31	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	2.3	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_180607B**	QC Batch: **R124529**			PrepDate			Analyst: **LR**
Turbidity	1.1	0.10	0.10		NTU	1	6/7/2018 11:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID	**MB-R124529**	SampType:	**MBLK**	TestCode:	**2130_W**	Units:	**NTU**	Prep Date:		RunNo:	**124529**
Client ID:	**PBW**	Batch ID:	**R124529**	TestNo:	**SM 2130B**			Analysis Date:	**6/7/2018**	SeqNo:	**3048086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID	**N030668-002CDUP**	SampType:	**DUP**	TestCode:	**2130_W**	Units:	**NTU**	Prep Date:		RunNo:	**124529**
Client ID:	**ZZZZZZ**	Batch ID:	**R124529**	TestNo:	**SM 2130B**			Analysis Date:	**6/7/2018**	SeqNo:	**3048089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	1.820	0.10						1.780	2.22	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	64	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	65	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	58	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	57	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	81	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	85	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_180608A**	QC Batch: **R124535**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	84	1.2	5.0		mg/L	1	6/8/2018 09:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID **LCS-R124535**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124535**
Client ID: **LCSW**	Batch ID: **R124535**	TestNo: **SM 2320 B**		Analysis Date: **6/8/2018**	SeqNo: **3048378**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	98.517	5.0	100.0	0	98.5	85	115				

Sample ID **MB-R124535**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124535**
Client ID: **PBW**	Batch ID: **R124535**	TestNo: **SM 2320 B**		Analysis Date: **6/8/2018**	SeqNo: **3048379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID **N030668-003DDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124535**
Client ID: **ZZZZZZ**	Batch ID: **R124535**	TestNo: **SM 2320 B**		Analysis Date: **6/8/2018**	SeqNo: **3048381**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	63.559	5.0						63.56	0	30	

Sample ID **N030668-010DMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124535**
Client ID: **ZZZZZZ**	Batch ID: **R124535**	TestNo: **SM 2320 B**		Analysis Date: **6/8/2018**	SeqNo: **3048387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	180.085	5.0	100.0	84.75	95.3	75	125				

Sample ID **N030668-010DMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **124535**
Client ID: **ZZZZZZ**	Batch ID: **R124535**	TestNo: **SM 2320 B**		Analysis Date: **6/8/2018**	SeqNo: **3048388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	177.966	5.0	100.0	84.75	93.2	75	125	180.1	1.18	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180607B** QC Batch: **68356**				PrepDate	**6/7/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180607B** QC Batch: **68356**				PrepDate		**6/7/2018**	Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180607B** QC Batch: **68356**				PrepDate		**6/7/2018**	Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180607B** QC Batch: **68356**				PrepDate	**6/7/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_180607B** QC Batch: **68356**				PrepDate	**6/7/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180607B**	QC Batch: **68356**			PrepDate	**6/7/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_180607B**	QC Batch: **68356**			PrepDate	**6/7/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	6/7/2018 12:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_WD

Sample ID **MB-68356**	SampType: **MBLK**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124511**
Client ID: **PBW**	Batch ID: **68356**	TestNo: **EPA 245.1**		Analysis Date: **6/7/2018**	SeqNo: **3047083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID **LCS-68356**	SampType: **LCS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124511**
Client ID: **LCSW**	Batch ID: **68356**	TestNo: **EPA 245.1**		Analysis Date: **6/7/2018**	SeqNo: **3047084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.971	0.20	5.000	0	99.4	85	115				

Sample ID **N030668-003C-MS**	SampType: **MS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124511**
Client ID: **ZZZZZZ**	Batch ID: **68356**	TestNo: **EPA 245.1**		Analysis Date: **6/7/2018**	SeqNo: **3047085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.720	0.20	5.000	0	94.4	75	125				

Sample ID **N030668-003C-MSD**	SampType: **MSD**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124511**
Client ID: **ZZZZZZ**	Batch ID: **68356**	TestNo: **EPA 245.1**		Analysis Date: **6/7/2018**	SeqNo: **3047086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.782	0.20	5.000	0	95.6	75	125	4.720	1.30	20	

Sample ID **N030668-011C-MS**	SampType: **MS**	TestCode: **245.1_WD**	Units: **µg/L**	Prep Date: **6/7/2018**	RunNo: **124511**
Client ID: **ZZZZZZ**	Batch ID: **68356**	TestNo: **EPA 245.1**		Analysis Date: **6/7/2018**	SeqNo: **3047097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	3.728	0.20	5.000	0	74.6	75	125				S

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-001

Client Sample ID: OW-05S-3V-Q218
Collection Date: 6/6/2018 12:37:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	1600	4.6	250		mg/L	500	6/13/2018 05:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	1.5	0.032	0.50		mg/L	5	6/8/2018 07:28 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	350	1.1	25		mg/L	50	6/13/2018 06:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-002

Client Sample ID: OW-05S-LF-Q218
Collection Date: 6/6/2018 12:08:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	1700	4.6	250		mg/L	500	6/13/2018 07:31 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	1.5	0.032	0.50		mg/L	5	6/8/2018 08:14 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	380	1.1	25		mg/L	50	6/13/2018 07:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-003

Client Sample ID: CW-02D-3V-Q218
Collection Date: 6/6/2018 9:40:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 08:01 PM
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	1.7	0.0065	0.10		mg/L	1	6/8/2018 08:29 PM
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/13/2018 08:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-004

Client Sample ID: CW-02D-LF-Q218
Collection Date: 6/6/2018 8:15:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 08:32 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	1.8	0.0065	0.10		mg/L	1	6/8/2018 08:44 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/13/2018 08:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-005

Client Sample ID: CW-02M-3V-Q218
Collection Date: 6/6/2018 9:12:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 09:03 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	3.0	0.032	0.50		mg/L	5	6/8/2018 05:41 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	6/13/2018 09:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-006

Client Sample ID: CW-02M-LF-Q218
Collection Date: 6/6/2018 8:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/13/2018 09:33 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.8	0.013	0.20		mg/L	2	6/8/2018 09:00 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180613A** QC Batch: **R124626**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	6/13/2018 09:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-009

Client Sample ID: OW-05M-3V-Q218
Collection Date: 6/6/2018 1:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/14/2018 10:48 AM
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.013	0.20		mg/L	2	6/8/2018 09:15 PM
ANIONS BY ION CHROMATOGRAPHY							
EPA 300.0							
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/14/2018 11:03 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-010

Client Sample ID: OW-05M-LF-Q218
Collection Date: 6/6/2018 12:08:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/14/2018 11:49 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.013	0.20		mg/L	2	6/8/2018 10:01 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/14/2018 12:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N030668
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N030668-011

Client Sample ID: MW-903-Q218
Collection Date: 6/6/2018 12:18:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	6/14/2018 12:20 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180608B** QC Batch: **R124561**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.013	0.20		mg/L	2	6/8/2018 10:16 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_180614A** QC Batch: **R124732**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	6/14/2018 12:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R124626_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	PBW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053110

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R124626_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	LCSW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053111

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.117	0.50	2.000	0	106	90	110				

Sample ID	N030646-004DMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3319.500	250	1000	2283	104	80	120				

Sample ID	N030646-004DMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053126

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3311.100	250	1000	2283	103	80	120	3320	0.253	20	

Sample ID	N030646-009DDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053127

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2075.100	250						2052	1.11	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	N030668-001CMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2559.300	250	1000	1596	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R124732_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	PBW	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058658

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R124732_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	LCSW	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.146	0.50	2.000	0	107	90	110				

Sample ID	N030686-001CDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	155.370	25						156.6	0.817	20	

Sample ID	N030686-001CMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058662

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	256.085	25	100.0	156.6	99.4	80	120				

Sample ID	N030686-001CMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	256.720	25	100.0	156.6	100	80	120	256.1	0.248	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	LCS-R124561_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	LCSW	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049817

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.230	0.10	1.250	0	98.4	90	110				

Sample ID	MB-R124561_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	PBW	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	N030668-005DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.123	0.50	6.250	3.010	97.8	80	120				

Sample ID	N030668-005DMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049821

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.171	0.50	6.250	3.010	98.6	80	120	9.122	0.525	20	

Sample ID	N030646-008DMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049825

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.097	0.50	6.250	2.013	97.3	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N030668-001CDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	124561
Client ID:	ZZZZZZ	Batch ID:	R124561	TestNo:	EPA 300.0			Analysis Date:	6/8/2018	SeqNo:	3049827

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.547	0.50						1.544	0.129	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R124626_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	PBW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053143

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID	LCS-R124626_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	LCSW	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053144

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.756	0.50	4.000	0	93.9	90	110				

Sample ID	N030646-006DMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	668.250	25	200.0	469.0	99.6	80	120				

Sample ID	N030646-006DMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	667.365	25	200.0	469.0	99.2	80	120	668.2	0.133	20	

Sample ID	N030646-009DDUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053160

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	485.230	25						479.7	1.16	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	N030668-001CMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124626
Client ID:	ZZZZZZ	Batch ID:	R124626	TestNo:	EPA 300.0			Analysis Date:	6/13/2018	SeqNo:	3053162

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	538.035	25	200.0	345.4	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
	Calculations are based on raw values				

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R124732_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	PBW	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.210	0.50									

Sample ID	LCS-R124732_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	LCSW	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058677

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.884	0.50	4.000	0	97.1	90	110				

Sample ID	N030686-001CDUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	231.320	25						228.7	1.14	20	

Sample ID	N030686-001CMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058680

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	423.180	25	200.0	228.7	97.2	80	120				

Sample ID	N030686-001CMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	124732
Client ID:	ZZZZZZ	Batch ID:	R124732	TestNo:	EPA 300.0			Analysis Date:	6/14/2018	SeqNo:	3058681

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	424.420	25	200.0	228.7	97.9	80	120	423.2	0.293	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:37:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	3.3	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.9	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.6	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.7	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.8	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.5	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.9	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
NITRATE/NITRITE-N BY CADMIUM REDUCTION							
			SM4500-NO3F				
RunID: **NV00922-WC_180616A**	QC Batch: **R124671**		PrepDate				Analyst: **QBM**
Nitrate/Nitrite as N	2.8	0.16	0.25		mg/L	5	6/16/2018

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 4500N03F_W

Sample ID **MB-R124671**	SampType: **MBLK**	TestCode: **4500N03F_W**	Units: **mg/L**	Prep Date:	RunNo: **124671**
Client ID: **PBW**	Batch ID: **R124671**	TestNo: **SM4500-NO3**		Analysis Date: **6/16/2018**	SeqNo: **3055401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	ND	0.050									

Sample ID **LCS-R124671**	SampType: **LCS**	TestCode: **4500N03F_W**	Units: **mg/L**	Prep Date:	RunNo: **124671**
Client ID: **LCSW**	Batch ID: **R124671**	TestNo: **SM4500-NO3**		Analysis Date: **6/16/2018**	SeqNo: **3055402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	0.461	0.050	0.5000	0	92.1	85	115				

Sample ID **N030668-001DDUP**	SampType: **DUP**	TestCode: **4500N03F_W**	Units: **mg/L**	Prep Date:	RunNo: **124671**
Client ID: **ZZZZZZ**	Batch ID: **R124671**	TestNo: **SM4500-NO3**		Analysis Date: **6/16/2018**	SeqNo: **3055406**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	2.951	0.25						3.326	12.0	20	

Sample ID **N030668-002DMS**	SampType: **MS**	TestCode: **4500N03F_W**	Units: **mg/L**	Prep Date:	RunNo: **124671**
Client ID: **ZZZZZZ**	Batch ID: **R124671**	TestNo: **SM4500-NO3**		Analysis Date: **6/16/2018**	SeqNo: **3055408**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	5.611	0.25	2.500	2.871	110	75	125				

Sample ID **N030668-002DMSD**	SampType: **MSD**	TestCode: **4500N03F_W**	Units: **mg/L**	Prep Date:	RunNo: **124671**
Client ID: **ZZZZZZ**	Batch ID: **R124671**	TestNo: **SM4500-NO3**		Analysis Date: **6/16/2018**	SeqNo: **3055409**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate/Nitrite as N	5.468	0.25	2.500	2.871	104	75	125	5.611	2.58	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
Calculations are based on raw values
E Value above quantitation range
R RPD outside accepted recovery limits
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:40:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**				PrepDate	**6/7/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/8/2018 12:50 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:15:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**				PrepDate	**6/7/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	6/8/2018 01:15 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 9:12:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**				PrepDate	**6/7/2018**	Analyst: **CEI**
Iron	110	18	20		ug/L	1	6/8/2018 01:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 8:21:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**				PrepDate	**6/7/2018**	Analyst: **CEI**
Iron	140	18	20		ug/L	1	6/8/2018 07:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 1:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**			PrepDate	**6/7/2018**		Analyst: **CEI**
Iron	22	18	20		ug/L	1	6/8/2018 07:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:08:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**			PrepDate	**6/7/2018**		Analyst: **CEI**
Iron	620	18	20		ug/L	1	6/8/2018 07:24 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-903-Q218
Lab Order:	N030668	**Collection Date:**	6/6/2018 12:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N030668-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_180607F**	QC Batch: **68348**			PrepDate	**6/7/2018**		Analyst: **CEI**
Iron	340	18	20		ug/L	1	6/8/2018 07:31 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N030668
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	**MB-68348**	SampType:	**MBLK**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/7/2018**	RunNo:	**124525**
Client ID:	**PBW**	Batch ID:	**68348**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/8/2018**	SeqNo:	**3049448**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID	**LCS-68348**	SampType:	**LCS**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/7/2018**	RunNo:	**124525**
Client ID:	**LCSW**	Batch ID:	**68348**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/8/2018**	SeqNo:	**3049454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	105.348	20	100.0	0	105	85	115				

Sample ID	**N030668-003F-MS**	SampType:	**MS**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/7/2018**	RunNo:	**124525**
Client ID:	**ZZZZZZ**	Batch ID:	**68348**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/8/2018**	SeqNo:	**3049458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	105.817	20	100.0	19.26	86.6	75	125				

Sample ID	**N030668-003F-MSD**	SampType:	**MSD**	TestCode:	**6010_WPGE**	Units:	**ug/L**	Prep Date:	**6/7/2018**	RunNo:	**124525**
Client ID:	**ZZZZZZ**	Batch ID:	**68348**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**6/8/2018**	SeqNo:	**3049459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	107.674	20	100.0	19.26	88.4	75	125	105.8	1.74	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference

Calculations are based on raw values

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 2

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Specify: RWQCB
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	Global ID:
Submitted By: Jason Mahr		Phone: 949-727-1400, ext 200 Fax:	Specify State:
Title: Project Manager	Phone: 916-786-3302 Fax:		
Signature: Date: 6/6/18	Sampled By: Jason Mahr	Matrix: Groundwater x; Sediment; Potable; Soil; NPDES; Other Solid; Surface	
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
Project Name: PG&E Topock - CMP	Signature: Date: 6/6/18		
Project Number: RC000753.801D			

Sample Receipt Condition

	Y	N
1. Chilled	✓	
2. Headspace	✓	
3. Container Intact	✓	
4. Seal Present	✓	
5. IR number	2	
6. Method of Cooling: ICE		

Sample Temp: 2.9°C | 2.8°C

Cooler:

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH 250 mL poly	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 1 L poly	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn 1 L poly	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo 1 L poly	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na, 1 L poly	Dissolved metals (EPA 245.1); HNO3 Mercury 1 L poly	Anions (E300.0); Chloride, Fluoride, Sulfate 1 liter poly	Specific Conductance (E120.1) 1 liter poly	pH (SM4500HB) 1 liter poly	TDS (SM2540C) 1 liter poly	Alkalinity (Total, reported as CaCO3) (SM2320B) 1 liter poly	Turbidity (SM2130B) 1 liter poly	Nitrate/Nitrite as Nitrogen (SM4500N03); H2SO4 125 mL poly	Total metals (SW6010B); HNO3 Fe 500 mL poly	Dissolved metals (EPA200.7) FF; HNO3 Na 1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N030668-01	OW-05S-3V-Q218	6/6/18	1237		X			X			X	X		X		X	X		X	E	4	P	BNSC	4 Bottles
2	-02	OW-05S-LF-Q218	6/6/18	1208		X			X			X	X		X		X	X		X	E	4	P	BNSC	4 Bottles
3	-03	CW-02D-3V-Q218	6/6/18	0940		X	X	X	X	X	X	X	X		X	X	X	X	X			E	6	P	BNSC	
4	-04	CW-02D-LF-Q218	6/6/18	0815		X	X	X	X	X	X	X	X		X	X	X	X	X			E	6	P	BNSC	
5	-05	CW-02M-3V-Q218	6/6/18	0912		X	X	X	X	X	X	X	X		X	X	X	X	X			E	6	P	BNSC	
6	-06	CW-02M-LF-Q218	6/6/18	0821		X	X	X	X	X	X	X	X		X	X	X	X	X			E	6	P	BNSC	
7	~~MW-727-Q218~~					X																E	1	P	BC	
8	-07	MW-729-Q218	6/6/18	1250		X																E	1	P	BC	
9	-08	MW-730-Q218	6/6/18	1330		X																E	1	P	BC	
10																										

Relinquished by (Signature and Printed Name): Date/Time: 6/6/18	Received by (Signature and Printed Name): Date/Time: 6/6/18 15:30
Relinquished by (Signature and Printed Name): Date/Time: 6/6/18 17:30	Received by (Signature and Printed Name): Date/Time: 6/6/18 17:30
Relinquished by (Signature and Printed Name): Date/Time:	Received by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

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Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ (Specify: RWQCB)
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Global ID: Specify State:
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	
Submitted By: Jason Mahn		Phone: 949-727-1400, ext 200 Fax:	
Title: Project Manager	Phone: 916-786-3302 Fax:		
Signature: Date: 6/6/18	Sampled By: Jason Mahn		

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Project Name: PG&E Topock - CMP

Project Number: RC000753.801D

Signature: Date: 6/6/18

Matrix: Groundwater x; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Sample Receipt Condition

	Y	N
1. Chilled	✓	
2. Headspace		✓
3. Container Intact	✓	
4. Seal Present		✓
5. IR number	2	

6. Method of Cooling: ICE

Sample Temp: 2.9°C / 2.8°C

Courier:

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH (250 mL poly)	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 (1 L poly)	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn (1 L poly)	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo (1 L poly)	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na, (1 L poly)	Dissolved metals (EPA 245.1); HNO3 Mercury (1 L poly)	Anions (E300.0); Chloride, Fluoride, Sulfate (1 liter poly)	Specific Conductance (E120.1) (1 liter poly)	pH (SM4500HB) (1 liter poly)	TDS (SM2540C) (1 liter poly)	Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly)	Turbidity (SM2130B) (1 liter poly)	Nitrate/Nitrite as Nitrogen (SM4500N03); H2SO4 (125 mL poly)	Total metals (SW6010B); HNO3 Fe (500 mL poly)	Dissolved metals (EPA200.7) FF; HNO3 Na (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N030668-09	OW-05M-3V-Q218	6/6/18	1300		X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
2	-10	OW-05M-LF-Q218	6/6/18	1208		X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
3	-11	MW-903-Q218	6/6/18	1218		X	X	X	X	X	X	X	X		X	X	X	X	X		E	6	P	BNSC	
4	~~MW-728-Q218~~					X															E	1	P	BC	SM
5																									
6																									
7																									
8																									
9																									
10																									

Relinquished by (Signature and Printed Name)	Date/Time	Relinquished by (Signature and Printed Name)	Date/Time
	6/6/18		6/6/18 15:30
	6/6/18 17:30		6/6/18 17:30

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives: H=HCL; N=HNO_3; S=H_2SO_4; C=4°C; Z=$Zn(AC)_2$; O=NaOH; T=$Na_2S_2O_3$; Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube; V=VOA; P=Poly; J=Jar; B=Tedlar; G=Glass; M=Metal; M=Metal; C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	6/6/2018	Workorder:	N030668
Rep sample Temp (Deg C):	2.9/2.8	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

For:

Checklist Completed By: DA 6/7/2018

Reviewed By: LR 6/8/2018

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-001A	OW-05S-3V-Q218	6/6/2018 12:37:00 PM	6/20/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-001B			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N030668-001C			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-001D			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-002A	OW-05S-LF-Q218	6/6/2018 12:08:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-002B			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N030668-002C			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-002C	OW-05S-LF-Q218	6/6/2018 12:08:00 PM	6/20/2018	Groundwater	SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-002D			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-003A	CW-02D-3V-Q218	6/6/2018 9:40:00 AM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-003B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-003C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-003D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-003D	CW-02D-3V-Q218	6/6/2018 9:40:00 AM	6/20/2018	Groundwater	SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-003E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-003F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-004A	CW-02D-LF-Q218	6/6/2018 8:15:00 AM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-004B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-004C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-004D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-004D	CW-02D-LF-Q218	6/6/2018 8:15:00 AM	6/20/2018	Groundwater	SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-004E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-004F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-005A	CW-02M-3V-Q218	6/6/2018 9:12:00 AM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-005B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-005C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-005D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-005D	CW-02M-3V-Q218	6/6/2018 9:12:00 AM	6/20/2018	Groundwater	SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-005E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-005F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-006A	CW-02M-LF-Q218	6/6/2018 8:21:00 AM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-006B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-006C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-006D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			6/20/2018			Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-006D	CW-02M-LF-Q218	6/6/2018 8:21:00 AM	6/20/2018	Groundwater	SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-006E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-006F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-007A	MW-729-Q218	6/6/2018 12:50:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-008A	MW-730-Q218	6/6/2018 1:30:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-009A	OW-05M-3V-Q218	6/6/2018 1:00:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-009B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-009C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-009D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-009D	OW-05M-3V-Q218	6/6/2018 1:00:00 PM	6/20/2018	Groundwater		Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR
			6/20/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-009E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-009F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-010A	OW-05M-LF-Q218	6/6/2018 12:08:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-010B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-010C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-010D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-010D	OW-05M-LF-Q218	6/6/2018 12:08:00 PM	6/20/2018	Groundwater		Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR
			6/20/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-010E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-010F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-011A	MW-903-Q218	6/6/2018 12:18:00 PM	6/20/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N030668-011B			6/20/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N030668-011C			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			6/20/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			6/20/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			6/20/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			6/20/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N030668-011D			6/20/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	LSR
			6/20/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR

ASSET Laboratories

WORK ORDER Summary

07-Jun-18

WorkOrder: N030668

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 6/6/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N030668-011D	MW-903-Q218	6/6/2018 12:18:00 PM	6/20/2018	Groundwater		Total Dissolved Solids Prep	☐	☐	☐	LSR
			6/20/2018		SM 2130B	TURBIDITY	☐	☐	☐	LSR
			6/20/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			6/20/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N030668-011E			6/20/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☐	WW
N030668-011F			6/20/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			6/20/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N030668-012A	FOLDER	6/20/2018	6/20/2018		EDD	RWQCB	☐	☐	☐	LAB
			6/20/2018		Folder	Folder	☐	☐	☐	LAB
			6/20/2018		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Jason Mahn

07-Jun-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM4500-NH3D		
N030668-003B / CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	8OZP	1		
N030668-004B / CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	8OZP	1		
N030668-005B / CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	8OZP	1		
N030668-006B / CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	8OZP	1		
N030668-009B / OW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	8OZP	1		
N030668-010B / OW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	8OZP	1		
N030668-011B / MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	8OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N30668A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Ammonia by SM4500NH3D. EDD Requirement Labspec7 edata.

GSO #: 540875664

	Date/Time		Date/Time
Relinquished by:	6/7/2018 17:00	**Received by:**	
Relinquished by:		**Received by:**	

Date of Report: 06/14/2018

Marlon Cartin

ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	N030668
BCL Project:	Level IV
BCL Work Order:	1818138
Invoice ID:	B306911

Enclosed are the results of analyses for samples received by the laboratory on 6/8/2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Chain of Custody and Cooler Receipt Form for 1818138 Page 1 of 2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

18-181138 IPC 6/8/18

QC Level: Level IV

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

18-181138

Field Sampler: Jason Mahn

07-Jun-18

Sample ID		Matrix	Date Collected	Bottle Type	Requested Tests		
					SM4500-NH3D		
N030668-003B	/ CW-02D-3V-Q218	Groundwater	6/6/2018 9:40:00 AM	8OZP	1		
N030668-004B	/ CW-02D-LF-Q218	Groundwater	6/6/2018 8:15:00 AM	8OZP	1		
N030668-005B	/ CW-02M-3V-Q218	Groundwater	6/6/2018 9:12:00 AM	8OZP	1		
N030668-006B	/ CW-02M-LF-Q218	Groundwater	6/6/2018 8:21:00 AM	8OZP	1		
N030668-009B	/ CW-05M-3V-Q218	Groundwater	6/6/2018 1:00:00 PM	8OZP	1		
N030668-010B	/ CW-05M-LF-Q218	Groundwater	6/6/2018 12:08:00 PM	8OZP	1		
N030668-011B	/ MW-903-Q218	Groundwater	6/6/2018 12:18:00 PM	8OZP	1		

CHK BY
DISTRIBUTION
WORKSHOP
SUB OUT

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N30668A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Ammonia by SM4500NH3D. EDD Requirement Labspec7 edata.

GSO #: 5408756664

	Date/Time		Date/Time
Relinquished by:	6/7/2018 17:00	Received by:	6.8.18 08:48
Relinquished by:		Received by:	

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Chain of Custody and Cooler Receipt Form for 1818138 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-18138

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☒ (Specify) GSO	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 97 Container: 8oz pe Thermometer ID: 274 Date/Time 6-8-18

Temperature: (A) 1.0 °C / (C) 1.8 °C Analyst Unit AD 08:48

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr+6										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A	A	A	A			
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: JM Date/Time: 6-8-18 1426 Rev 21 05/23/2016

A = Actual / C = Corrected

(S:\WFDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20)

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1818138-01	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 09:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-003B / CW-02D-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-02	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 08:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-004B / CW-02D-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-03	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 09:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-005B / CW-02M-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-04	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 08:21
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-006B / CW-02M-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-05	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 13:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-009B / OW-05M-3V-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-06	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 12:08
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-010B / OW-05M-LF-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1818138-07	**COC Number:**	---	**Receive Date:**	06/08/2018 08:48
	Project Number:	---	**Sampling Date:**	06/06/2018 12:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N030668-011B / MW-903-Q218	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-01 | **Client Sample Name:** N030668-003B / CW-02D-3V-Q218, 6/6/2018 9:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:54	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-02 | **Client Sample Name:** N030668-004B / CW-02D-LF-Q218, 6/6/2018 8:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:56	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-03 | **Client Sample Name:** N030668-005B / CW-02M-3V-Q218, 6/6/2018 9:12:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 08:05	06/13/18 16:58	JMH	SC-1	1	B016462

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-04 | **Client Sample Name:** N030668-006B / CW-02M-LF-Q218, 6/6/2018 8:21:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 09:49	06/13/18 17:07	JMH	SC-1	1	B016463

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-05 | **Client Sample Name:** N030668-009B / OW-05M-3V-Q218, 6/6/2018 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 09:49	06/13/18 17:08	JMH	SC-1	1	B016463

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-06 | **Client Sample Name:** N030668-010B / OW-05M-LF-Q218, 6/6/2018 12:08:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 09:49	06/13/18 17:09	JMH	SC-1	1	B016463

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1818138-07 | **Client Sample Name:** N030668-011B / MW-903-Q218, 6/6/2018 12:18:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	06/13/18 09:49	06/13/18 17:10	JMH	SC-1	1	B016463

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B016462						
Ammonia as N (Distilled)	B016462-BLK1	ND	mg/L	0.20		
QC Batch ID: B016463						
Ammonia as N (Distilled)	B016463-BLK1	ND	mg/L	0.20		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B016462										
Ammonia as N (Distilled)	B016462-BS1	LCS	0.97180	1.0000	mg/L	97.2		85 - 115		
QC Batch ID: B016463										
Ammonia as N (Distilled)	B016463-BS1	LCS	0.95690	1.0000	mg/L	95.7		85 - 115		

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B016462	Used client sample: N										
Ammonia as N (Distilled)	DUP	1817953-03	0.61480	0.53820		mg/L	13.3		20		
	MS	1817953-03	0.61480	1.6359	1.0000	mg/L		102		80 - 120	
	MSD	1817953-03	0.61480	1.5295	1.0000	mg/L	6.7	91.5	20	80 - 120	
QC Batch ID: B016463	Used client sample: N										
Ammonia as N (Distilled)	DUP	1817953-04	0.54400	0.61930		mg/L	12.9		20		
	MS	1817953-04	0.54400	1.6165	1.0000	mg/L		107		80 - 120	
	MSD	1817953-04	0.54400	1.6509	1.0000	mg/L	2.1	111	20	80 - 120	

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ASSET Laboratories
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 06/14/2018 13:50
Project: Level IV
Project Number: N030668
Project Manager: Marlon Cartin

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

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December 07, 2018

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N033213

RE: PG&E Topock - CMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 03, 2018 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Litucas for

Quennie Manimtim
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033213

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Nitrate by SM4500-NO3F was subcontracted to Eurofins CalScience Inc.- Garden Grove, CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N033213-002E-MS2, N033213-002E-MSD2 and N033213-012E-MS2 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N033213-001E-MS1, N033213-001E-MSD1 and N033213-011E-MS1 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Dilution was necessary on Beryllium for samples N033213-011, -012, -013, -014, -015, -016 and -017 due to associated internal standard not meeting method criteria possibly due to matrix interference. Samples were analyzed with dilution and internal standard met method criteria. Affected analytes for this failed internal standard were reported at dilution that meet internal standard recovery limit.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N033213-001E-MS, N033213-001E-MSD and N033213-012E-MS possibly due to matrix

interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (1.1 ug/L) for sample N033213-004 (CW-02M-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.4 and 2.1 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (0.96 ug/L) for sample N033213-008 (OW-02M-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.0 and 1.5 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (2.7 ug/L) and hexavalent chromium (1.2 ug/L) for sample N033213-012 (CW-01M-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.8 and 2.5 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N033213-014 (CW-03D-3V-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.1 and 0.92 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0.22 ug/L) for sample N033213-015 (CW-03D-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.0 and 0.85 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (10 ug/L) and hexavalent chromium (3.3 ug/L) for sample N033213-017 (CW-03M-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 11 and 6.2 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Since the result of total dissolved chromium (4.76 ug/L) differs with hexavalent chromium (3.93 ug/L) by no more than 20% for sample N033213-016 (CW-03M-3V-Q418), reanalysis of the sample was not necessary.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (1.1 ug/L) for sample N033213-004 (CW-02M-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (0.96 ug/L) for sample N033213-008 (OW-02M-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (2.7 ug/L) and hexavalent chromium (1.2 ug/L) for sample N033213-012 (CW-01M-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N033213-014 (CW-03D-3V-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0.22 ug/L) for sample N033213-015 (CW-03D-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (10 ug/L) and hexavalent chromium (3.3 ug/L) for sample N033213-017 (CW-03M-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Since the result of total dissolved chromium (4.76 ug/L) differs with hexavalent chromium (3.93 ug/L) by no more than 20% for sample N033213-016 (CW-03M-3V-Q418), reanalysis of the sample was not necessary.

Analytical Comments for SM 5310C:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable. All samples were spiked and recoveries at 1x and 10x dilutions were biased low while spike recoveries at higher dilution passed criteria. Samples were reported at 10x dilution. Please see attached correspondence.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033213
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033213-001A	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-001B	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-001C	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-001D	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-001E	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-001F	CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	12/3/2018	12/7/2018
N033213-002A	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-002B	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-002C	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-002D	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-002E	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-002F	CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	12/3/2018	12/7/2018
N033213-003A	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-003B	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-003C	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-003D	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-003E	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-003F	CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	12/3/2018	12/7/2018
N033213-004A	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-004B	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-004C	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-004D	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-004E	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-004F	CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	12/3/2018	12/7/2018
N033213-005A	MW-704-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-006A	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018
N033213-006B	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018
N033213-006C	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018
N033213-006D	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033213
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033213-006E	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018
N033213-006F	OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	12/3/2018	12/7/2018
N033213-007A	OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	12/3/2018	12/7/2018
N033213-007B	OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	12/3/2018	12/7/2018
N033213-007C	OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	12/3/2018	12/7/2018
N033213-007D	OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	12/3/2018	12/7/2018
N033213-008A	OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	12/3/2018	12/7/2018
N033213-008B	OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	12/3/2018	12/7/2018
N033213-008C	OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	12/3/2018	12/7/2018
N033213-008D	OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	12/3/2018	12/7/2018
N033213-009A	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-009B	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-009C	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-009D	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-009E	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-009F	CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	12/3/2018	12/7/2018
N033213-010A	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-010B	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-010C	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-010D	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-010E	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-010F	CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	12/3/2018	12/7/2018
N033213-011A	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-011B	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-011C	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-011D	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-011E	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-011F	CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	12/3/2018	12/7/2018
N033213-012A	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018
N033213-012B	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033213
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033213-012C	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018
N033213-012D	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018
N033213-012E	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018
N033213-012F	CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	12/3/2018	12/7/2018
N033213-013A	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-013B	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-013C	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-013D	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-013E	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-013F	MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	12/3/2018	12/7/2018
N033213-014A	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014B	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014C	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014D	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014E	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014F	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-014G	CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	12/3/2018	12/7/2018
N033213-015A	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015B	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015C	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015D	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015E	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015F	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-015G	CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-016A	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-016B	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-016C	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-016D	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-016E	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-016F	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033213
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033213-016G	CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	12/3/2018	12/7/2018
N033213-017A	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017B	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017C	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017D	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017E	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017F	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-017G	CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	12/3/2018	12/7/2018
N033213-018A	MW-701-Q418	Groundwater	12/3/2018 3:45:00 PM	12/3/2018	12/7/2018
N033213-019A	MW-702-Q418	Groundwater	12/3/2018 4:10:00 PM	12/3/2018	12/7/2018
N033213-020A	MW-703-Q418	Groundwater	12/3/2018 4:20:00 PM	12/3/2018	12/7/2018

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7900	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7800	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7800	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7800	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7900	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01S-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:09:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7100	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7900	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8000	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8000	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7900	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7800	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	7900	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8000	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8000	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8600	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181204D**	QC Batch: **R130289**			PrepDate			Analyst: **LR**
Specific Conductance	8600	0.10	0.10		umhos/cm	1	12/4/2018 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID	N033213-001BDUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	130289
Client ID:	ZZZZZZ	Batch ID:	R130289	TestNo:	EPA 120.1			Analysis Date:	12/4/2018	SeqNo:	3217937

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7900.000	0.10						7890	0.127	2	

Sample ID	N033213-014BDUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	130289
Client ID:	ZZZZZZ	Batch ID:	R130289	TestNo:	EPA 120.1			Analysis Date:	12/4/2018	SeqNo:	3217952

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	8020.000	0.10						8040	0.249	2	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3800	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3800	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01S-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:09:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3900	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204G**	QC Batch: **71604**				PrepDate	**12/4/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181204H**	QC Batch: **71605**			PrepDate	**12/4/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4500	50	50		mg/L	1	12/4/2018 01:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-71604	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130319
Client ID:	LCSW	Batch ID:	71604	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219216

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	948.000	10	1000	0	94.8	80	120				

Sample ID	MB-71604	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130319
Client ID:	PBW	Batch ID:	71604	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219217

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N033213-001BDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130319
Client ID:	ZZZZZZ	Batch ID:	71604	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219219

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3855.000	50						3915	1.54	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-71605	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130320
Client ID:	LCSW	Batch ID:	71605	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219233

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	957.000	10	1000	0	95.7	80	120				

Sample ID	MB-71605	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130320
Client ID:	PBW	Batch ID:	71605	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219234

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N033213-016BDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	130320
Client ID:	ZZZZZZ	Batch ID:	71605	TestNo:	SM2540C			Analysis Date:	12/4/2018	SeqNo:	3219240

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4325.000	50						4145	4.25	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 03:08 PM
Boron	1100	74	100		µg/L	1	12/4/2018 03:08 PM
Calcium	110000	85	500		µg/L	1	12/4/2018 03:08 PM
Iron	ND	18	20		µg/L	1	12/4/2018 03:08 PM
Magnesium	6000	48	100		µg/L	1	12/4/2018 03:08 PM
Potassium	13000	85	500		µg/L	1	12/5/2018 11:42 AM
Sodium	2300000	9600	50000		µg/L	100	12/5/2018 01:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-002

Client Sample ID: CW-02D-LF-Q418
Collection Date: 12/3/2018 1:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 03:47 PM
Boron	1100	74	100		µg/L	1	12/4/2018 03:47 PM
Calcium	110000	85	500		µg/L	1	12/4/2018 03:47 PM
Iron	ND	18	20		µg/L	1	12/4/2018 03:47 PM
Magnesium	6500	48	100		µg/L	1	12/4/2018 03:47 PM
Potassium	13000	85	500		µg/L	1	12/5/2018 11:47 AM
Sodium	1700000	9600	50000		µg/L	100	12/5/2018 03:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 03:56 PM
Boron	1100	74	100		µg/L	1	12/4/2018 03:56 PM
Calcium	130000	85	500		µg/L	1	12/4/2018 03:56 PM
Iron	ND	18	20		µg/L	1	12/4/2018 03:56 PM
Magnesium	9700	48	100		µg/L	1	12/4/2018 03:56 PM
Potassium	12000	85	500		µg/L	1	12/5/2018 11:52 AM
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-004

Client Sample ID: CW-02M-LF-Q418
Collection Date: 12/3/2018 1:21:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 04:04 PM
Boron	1200	74	100		µg/L	1	12/4/2018 04:04 PM
Calcium	130000	85	500		µg/L	1	12/4/2018 04:04 PM
Iron	ND	18	20		µg/L	1	12/4/2018 04:04 PM
Magnesium	9600	48	100		µg/L	1	12/4/2018 04:04 PM
Potassium	13000	85	500		µg/L	1	12/5/2018 11:57 AM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 03:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-006

Client Sample ID: OW-01M-Q418
Collection Date: 12/3/2018 3:28:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 04:27 PM
Boron	1000	74	100		µg/L	1	12/4/2018 04:27 PM
Calcium	140000	85	500		µg/L	1	12/4/2018 04:27 PM
Iron	ND	18	20		µg/L	1	12/4/2018 04:27 PM
Magnesium	26000	48	100		µg/L	1	12/4/2018 04:27 PM
Potassium	15000	85	500		µg/L	1	12/5/2018 12:03 PM
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01S-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:09:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181205C**	QC Batch: **71582**			PrepDate	**12/4/2018**		Analyst: **CEI**
Sodium	980000	9600	50000		µg/L	100	12/5/2018 03:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181205C**	QC Batch: **71582**			PrepDate	**12/4/2018**		Analyst: **CEI**
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-009

Client Sample ID: CW-01D-3V-Q418
Collection Date: 12/3/2018 2:24:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 04:51 PM
Boron	1100	74	100		µg/L	1	12/4/2018 04:51 PM
Calcium	150000	85	500		µg/L	1	12/4/2018 04:51 PM
Iron	ND	18	20		µg/L	1	12/4/2018 04:51 PM
Magnesium	18000	48	100		µg/L	1	12/4/2018 04:51 PM
Potassium	14000	85	500		µg/L	1	12/5/2018 12:18 PM
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 05:00 PM
Boron	1000	74	100		µg/L	1	12/4/2018 05:00 PM
Calcium	150000	85	500		µg/L	1	12/4/2018 05:00 PM
Iron	ND	18	20		µg/L	1	12/4/2018 05:00 PM
Magnesium	17000	48	100		µg/L	1	12/4/2018 05:00 PM
Potassium	13000	85	500		µg/L	1	12/5/2018 12:31 PM
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 05:11 PM
Boron	1200	74	100		µg/L	1	12/4/2018 05:11 PM
Calcium	160000	85	500		µg/L	1	12/4/2018 05:11 PM
Iron	ND	18	20		µg/L	1	12/4/2018 05:11 PM
Magnesium	14000	48	100		µg/L	1	12/4/2018 05:11 PM
Potassium	14000	85	500		µg/L	1	12/5/2018 12:36 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 03:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 05:32 PM
Boron	1200	74	100		µg/L	1	12/4/2018 05:32 PM
Calcium	170000	85	500		µg/L	1	12/4/2018 05:32 PM
Iron	ND	18	20		µg/L	1	12/4/2018 05:32 PM
Magnesium	15000	48	100		µg/L	1	12/4/2018 05:32 PM
Potassium	14000	85	500		µg/L	1	12/5/2018 12:41 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 03:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-013

Client Sample ID: MW-900-Q418
Collection Date: 12/3/2018 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 06:13 PM
Boron	1200	74	100		µg/L	1	12/4/2018 06:13 PM
Calcium	150000	85	500		µg/L	1	12/4/2018 06:13 PM
Iron	ND	18	20		µg/L	1	12/4/2018 06:13 PM
Magnesium	16000	48	100		µg/L	1	12/4/2018 06:13 PM
Potassium	13000	85	500		µg/L	1	12/5/2018 12:46 PM
Sodium	1500000	9600	50000		µg/L	100	12/5/2018 03:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-014

Client Sample ID: CW-03D-3V-Q418
Collection Date: 12/3/2018 3:50:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 06:21 PM
Boron	1000	74	100		µg/L	1	12/4/2018 06:21 PM
Calcium	67000	85	500		µg/L	1	12/4/2018 06:21 PM
Iron	ND	18	20		µg/L	1	12/4/2018 06:21 PM
Magnesium	4900	48	100		µg/L	1	12/4/2018 06:21 PM
Potassium	11000	85	500		µg/L	1	12/5/2018 12:51 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 04:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-015

Client Sample ID: CW-03D-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/4/2018 06:59 PM
Boron	880	74	100		µg/L	1	12/4/2018 06:59 PM
Calcium	70000	85	500		µg/L	1	12/4/2018 06:59 PM
Iron	ND	18	20		µg/L	1	12/4/2018 06:59 PM
Magnesium	4100	48	100		µg/L	1	12/4/2018 06:59 PM
Potassium	12000	85	500		µg/L	1	12/5/2018 01:03 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 04:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-016

Client Sample ID: CW-03M-3V-Q418
Collection Date: 12/3/2018 3:40:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181204C** QC Batch: **71582** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/4/2018 07:05 PM
Boron	1000	74	100		µg/L	1	12/4/2018 07:05 PM
Calcium	170000	85	500		µg/L	1	12/4/2018 07:05 PM
Iron	ND	18	20		µg/L	1	12/4/2018 07:05 PM
Magnesium	11000	48	100		µg/L	1	12/4/2018 07:05 PM
Potassium	18000	85	500		µg/L	1	12/5/2018 01:15 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 04:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-017

Client Sample ID: CW-03M-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181204C**	QC Batch: **71582**				PrepDate	**12/4/2018**	Analyst: **CEI**
Aluminum	85	40	50		µg/L	1	12/4/2018 07:14 PM
Boron	1000	74	100		µg/L	1	12/4/2018 07:14 PM
Calcium	170000	85	500		µg/L	1	12/4/2018 07:14 PM
Iron	140	18	20		µg/L	1	12/4/2018 07:14 PM
Magnesium	11000	48	100		µg/L	1	12/4/2018 07:14 PM
Potassium	19000	85	500		µg/L	1	12/5/2018 01:20 PM
Sodium	1600000	9600	50000		µg/L	100	12/5/2018 04:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **MB-71582**	SampType: **MBLK**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130308**
Client ID: **PBW**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/4/2018**	SeqNo: **3218527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	50									
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID **LCS1-71582**	SampType: **LCS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130308**
Client ID: **LCSW**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/4/2018**	SeqNo: **3218528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5071.206	50	5000	0	101	85	115				
Boron	938.884	100	1000	0	93.9	85	115				
Calcium	4818.868	500	5000	0	96.4	85	115				
Iron	100.588	20	100.0	0	101	85	115				
Magnesium	5157.635	100	5000	0	103	85	115				

Sample ID **N033213-001E-MS1**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130308**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/4/2018**	SeqNo: **3218532**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5144.098	50	5000	0	103	75	125				
Boron	2433.074	100	1000	1066	137	75	125				S
Calcium	113134.124	500	5000	107600	111	75	125				
Iron	96.616	20	100.0	0	96.6	75	125				
Magnesium	10845.864	100	5000	6050	95.9	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N033213-001E-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130308	
Client ID:	ZZZZZZ	Batch ID:	71582	TestNo:	EPA 200.7			Analysis Date:	12/4/2018	SeqNo:	3218533	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	5139.897	50	5000	0	103	75	125	5144	0.0817	20		
Boron	2434.921	100	1000	1066	137	75	125	2433	0.0759	20	S	
Calcium	112696.458	500	5000	107600	103	75	125	113100	0.388	20		
Iron	96.256	20	100.0	0	96.3	75	125	96.62	0.373	20		
Magnesium	10823.906	100	5000	6050	95.5	75	125	10850	0.203	20		

Sample ID	N033213-011E-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130308	
Client ID:	ZZZZZZ	Batch ID:	71582	TestNo:	EPA 200.7			Analysis Date:	12/4/2018	SeqNo:	3218545	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	5273.990	50	5000	0	105	75	125					
Boron	2570.745	100	1000	1156	141	75	125				S	
Calcium	163822.321	500	5000	162200	31.8	75	125				S	
Iron	98.110	20	100.0	0	98.1	75	125					
Magnesium	18327.082	100	5000	14230	82.0	75	125					

Sample ID	MB-71582	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130314	
Client ID:	PBW	Batch ID:	71582	TestNo:	EPA 200.7			Analysis Date:	12/5/2018	SeqNo:	3219014	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Potassium	ND	500										
Sodium	ND	500										

Sample ID	LCS2-71582	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130314	
Client ID:	LCSW	Batch ID:	71582	TestNo:	EPA 200.7			Analysis Date:	12/5/2018	SeqNo:	3219015	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Potassium	18020.607	500	20000	0	90.1	85	115					
Sodium	18674.485	500	20000	0	93.4	85	115					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **N033213-002E-MS2**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130314**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/5/2018**	SeqNo: **3219359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1573574.462	50000	20000	1656000	-414	75	125				S

Sample ID **N033213-002E-MSD**	SampType: **MSD**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130314**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/5/2018**	SeqNo: **3219360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1573486.570	50000	20000	1656000	-415	75	125	1574000	0.00559	20	S

Sample ID **N033213-002E-MS2**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130314**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/5/2018**	SeqNo: **3219362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	34007.906	500	20000	13140	104	75	125				

Sample ID **N033213-002E-MSD**	SampType: **MSD**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130314**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/5/2018**	SeqNo: **3219367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	34153.290	500	20000	13140	105	75	125	34010	0.427	20	

Sample ID **N033213-012E-MS2**	SampType: **MS**	TestCode: **200.7_WDPG**	Units: **µg/L**	Prep Date: **12/4/2018**	RunNo: **130314**
Client ID: **ZZZZZZ**	Batch ID: **71582**	TestNo: **EPA 200.7**		Analysis Date: **12/5/2018**	SeqNo: **3219380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1605711.633	50000	20000	1574000	160	75	125				S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N033213-012E-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130314
Client ID:	ZZZZZZ	Batch ID:	71582	TestNo:	EPA 200.7			Analysis Date:	12/5/2018	SeqNo:	3219381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	35209.361	500	20000	14240	105	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-001

Client Sample ID: CW-02D-3V-Q418
Collection Date: 12/3/2018 2:25:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 01:07 PM
Arsenic	2.8	0.081	0.10		µg/L	1	12/4/2018 01:07 PM
Barium	16	0.15	1.0		µg/L	1	12/4/2018 01:07 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 01:07 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 01:07 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 01:07 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 01:07 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 01:07 PM
Manganese	2.1	0.26	0.50		µg/L	1	12/4/2018 01:07 PM
Molybdenum	12	0.21	0.50		µg/L	1	12/4/2018 01:07 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 01:07 PM
Selenium	3.8	0.36	0.50		µg/L	1	12/4/2018 01:07 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 01:07 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 01:07 PM
Vanadium	3.9	0.28	1.0		µg/L	1	12/4/2018 01:07 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-002

Client Sample ID: CW-02D-LF-Q418
Collection Date: 12/3/2018 1:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**				PrepDate	**12/4/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 01:36 PM
Arsenic	2.6	0.081	0.10		µg/L	1	12/4/2018 01:36 PM
Barium	17	0.15	1.0		µg/L	1	12/4/2018 01:36 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 01:36 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 01:36 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 01:36 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 01:36 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 01:36 PM
Manganese	2.2	0.26	0.50		µg/L	1	12/4/2018 01:36 PM
Molybdenum	13	0.21	0.50		µg/L	1	12/4/2018 01:36 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 01:36 PM
Selenium	3.4	0.36	0.50		µg/L	1	12/4/2018 01:36 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 01:36 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 01:36 PM
Vanadium	3.8	0.28	1.0		µg/L	1	12/4/2018 01:36 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 01:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-003

Client Sample ID: CW-02M-3V-Q418
Collection Date: 12/3/2018 2:04:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 01:41 PM
Arsenic	2.0	0.081	0.10		µg/L	1	12/4/2018 01:41 PM
Barium	67	0.15	1.0		µg/L	1	12/4/2018 01:41 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 01:41 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 01:41 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 01:41 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 01:41 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 01:41 PM
Manganese	1.6	0.26	0.50		µg/L	1	12/4/2018 01:41 PM
Molybdenum	15	0.21	0.50		µg/L	1	12/4/2018 01:41 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 01:41 PM
Selenium	3.7	0.36	0.50		µg/L	1	12/4/2018 01:41 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 01:41 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 01:41 PM
Vanadium	3.6	0.28	1.0		µg/L	1	12/4/2018 01:41 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 01:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-004

Client Sample ID: CW-02M-LF-Q418
Collection Date: 12/3/2018 1:21:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**				PrepDate	**12/4/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 01:47 PM
Arsenic	1.9	0.081	0.10		µg/L	1	12/4/2018 01:47 PM
Barium	58	0.15	1.0		µg/L	1	12/4/2018 01:47 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 01:47 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 01:47 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 01:47 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 01:47 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 01:47 PM
Manganese	1.8	0.26	0.50		µg/L	1	12/4/2018 01:47 PM
Molybdenum	18	0.21	0.50		µg/L	1	12/4/2018 01:47 PM
Nickel	1.5	0.26	1.0		µg/L	1	12/4/2018 01:47 PM
Selenium	3.7	0.36	0.50		µg/L	1	12/4/2018 01:47 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 01:47 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 01:47 PM
Vanadium	3.5	0.28	1.0		µg/L	1	12/4/2018 01:47 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 01:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-006

Client Sample ID: OW-01M-Q418
Collection Date: 12/3/2018 3:28:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:04 PM
Arsenic	2.3	0.081	0.10		µg/L	1	12/4/2018 02:04 PM
Barium	70	0.15	1.0		µg/L	1	12/4/2018 02:04 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 02:04 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:04 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:04 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:04 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:04 PM
Manganese	ND	0.26	0.50		µg/L	1	12/4/2018 02:04 PM
Molybdenum	23	0.21	0.50		µg/L	1	12/4/2018 02:04 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:04 PM
Selenium	4.1	0.36	0.50		µg/L	1	12/4/2018 03:30 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:04 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:04 PM
Vanadium	3.1	0.28	1.0		µg/L	1	12/4/2018 02:04 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01S-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:09:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**							
Molybdenum	4.0	0.21	0.50		µg/L	1	12/4/2018 02:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**							
Molybdenum	22	0.21	0.50		µg/L	1	12/4/2018 02:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-009

Client Sample ID: CW-01D-3V-Q418
Collection Date: 12/3/2018 2:24:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:21 PM
Arsenic	1.2	0.081	0.10		µg/L	1	12/4/2018 02:21 PM
Barium	24	0.15	1.0		µg/L	1	12/4/2018 02:21 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 02:21 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:21 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:21 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:21 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:21 PM
Manganese	ND	0.26	0.50		µg/L	1	12/4/2018 02:21 PM
Molybdenum	20	0.21	0.50		µg/L	1	12/4/2018 02:21 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:21 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/4/2018 02:21 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:21 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:21 PM
Vanadium	2.3	0.28	1.0		µg/L	1	12/4/2018 02:21 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-010

Client Sample ID: CW-01D-LF-Q418
Collection Date: 12/3/2018 1:35:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:27 PM
Arsenic	1.1	0.081	0.10		µg/L	1	12/4/2018 02:27 PM
Barium	24	0.15	1.0		µg/L	1	12/4/2018 02:27 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/4/2018 02:27 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:27 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:27 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:27 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:27 PM
Manganese	0.78	0.26	0.50		µg/L	1	12/4/2018 02:27 PM
Molybdenum	20	0.21	0.50		µg/L	1	12/4/2018 02:27 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:27 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/4/2018 02:27 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:27 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:27 PM
Vanadium	2.2	0.28	1.0		µg/L	1	12/4/2018 02:27 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-011

Client Sample ID: CW-01M-3V-Q418
Collection Date: 12/3/2018 2:18:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:33 PM
Arsenic	1.2	0.081	0.10		µg/L	1	12/4/2018 02:33 PM
Barium	87	0.15	1.0		µg/L	1	12/4/2018 02:33 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 03:39 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:33 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:33 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:33 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:33 PM
Manganese	1.0	0.26	0.50		µg/L	1	12/4/2018 02:33 PM
Molybdenum	17	0.21	0.50		µg/L	1	12/4/2018 02:33 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:33 PM
Selenium	3.8	0.36	0.50		µg/L	1	12/4/2018 02:33 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:33 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:33 PM
Vanadium	2.5	0.28	1.0		µg/L	1	12/4/2018 02:33 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-012

Client Sample ID: CW-01M-LF-Q418
Collection Date: 12/3/2018 1:41:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:38 PM
Arsenic	1.1	0.081	0.10		µg/L	1	12/4/2018 02:38 PM
Barium	81	0.15	1.0		µg/L	1	12/4/2018 02:38 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 03:44 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:38 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:38 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:38 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:38 PM
Manganese	1.7	0.26	0.50		µg/L	1	12/4/2018 02:38 PM
Molybdenum	17	0.21	0.50		µg/L	1	12/4/2018 02:38 PM
Nickel	2.9	0.26	1.0		µg/L	1	12/4/2018 02:38 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/4/2018 02:38 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:38 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:38 PM
Vanadium	2.4	0.28	1.0		µg/L	1	12/4/2018 02:38 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-013

Client Sample ID: MW-900-Q418
Collection Date: 12/3/2018 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**				PrepDate	**12/4/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:50 PM
Arsenic	1.2	0.081	0.10		µg/L	1	12/4/2018 02:50 PM
Barium	84	0.15	1.0		µg/L	1	12/4/2018 02:50 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 03:56 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:50 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:50 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:50 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:50 PM
Manganese	2.3	0.26	0.50		µg/L	1	12/4/2018 02:50 PM
Molybdenum	16	0.21	0.50		µg/L	1	12/4/2018 02:50 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:50 PM
Selenium	3.9	0.36	0.50		µg/L	1	12/4/2018 02:50 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:50 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:50 PM
Vanadium	2.3	0.28	1.0		µg/L	1	12/4/2018 02:50 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 02:55 PM
Arsenic	1.5	0.081	0.10		µg/L	1	12/4/2018 02:55 PM
Barium	15	0.15	1.0		µg/L	1	12/4/2018 02:55 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 04:01 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 02:55 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 02:55 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 02:55 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 02:55 PM
Manganese	2.6	0.26	0.50		µg/L	1	12/4/2018 02:55 PM
Molybdenum	14	0.21	0.50		µg/L	1	12/4/2018 02:55 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 02:55 PM
Selenium	3.9	0.36	0.50		µg/L	1	12/4/2018 02:55 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 02:55 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 02:55 PM
Vanadium	2.4	0.28	1.0		µg/L	1	12/4/2018 02:55 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 02:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-015

Client Sample ID: CW-03D-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 03:13 PM
Arsenic	1.5	0.081	0.10		µg/L	1	12/4/2018 03:13 PM
Barium	16	0.15	1.0		µg/L	1	12/4/2018 03:13 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 04:07 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 03:13 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 03:13 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 03:13 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 03:13 PM
Manganese	2.4	0.26	0.50		µg/L	1	12/4/2018 03:13 PM
Molybdenum	15	0.21	0.50		µg/L	1	12/4/2018 03:13 PM
Nickel	ND	0.26	1.0		µg/L	1	12/4/2018 03:13 PM
Selenium	4.2	0.36	0.50		µg/L	1	12/4/2018 03:13 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 03:13 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 03:13 PM
Vanadium	2.6	0.28	1.0		µg/L	1	12/4/2018 03:13 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 03:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-016

Client Sample ID: CW-03M-3V-Q418
Collection Date: 12/3/2018 3:40:00 PM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181204A** QC Batch: **71587** PrepDate **12/4/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 03:19 PM
Arsenic	1.3	0.081	0.10		µg/L	1	12/4/2018 03:19 PM
Barium	41	0.15	1.0		µg/L	1	12/4/2018 03:19 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 04:24 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 03:19 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 03:19 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 03:19 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 03:19 PM
Manganese	2.2	0.26	0.50		µg/L	1	12/4/2018 03:19 PM
Molybdenum	30	0.21	0.50		µg/L	1	12/4/2018 03:19 PM
Nickel	1.2	0.26	1.0		µg/L	1	12/4/2018 03:19 PM
Selenium	2.7	0.36	0.50		µg/L	1	12/4/2018 03:19 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 03:19 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 03:19 PM
Vanadium	2.7	0.28	1.0		µg/L	1	12/4/2018 03:19 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 03:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-017

Client Sample ID: CW-03M-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**				PrepDate	**12/4/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	12/4/2018 03:25 PM
Arsenic	1.4	0.081	0.10		µg/L	1	12/4/2018 03:25 PM
Barium	41	0.15	1.0		µg/L	1	12/4/2018 03:25 PM
Beryllium	ND	0.21	2.5		µg/L	5	12/4/2018 04:30 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/4/2018 03:25 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/4/2018 03:25 PM
Copper	ND	0.55	1.0		µg/L	1	12/4/2018 03:25 PM
Lead	ND	0.13	1.0		µg/L	1	12/4/2018 03:25 PM
Manganese	8.1	0.26	0.50		µg/L	1	12/4/2018 03:25 PM
Molybdenum	30	0.21	0.50		µg/L	1	12/4/2018 03:25 PM
Nickel	1.9	0.26	1.0		µg/L	1	12/4/2018 03:25 PM
Selenium	2.7	0.36	0.50		µg/L	1	12/4/2018 03:25 PM
Silver	ND	0.23	0.50		µg/L	1	12/4/2018 03:25 PM
Thallium	ND	0.19	0.50		µg/L	1	12/4/2018 03:25 PM
Vanadium	3.0	0.28	1.0		µg/L	1	12/4/2018 03:25 PM
Zinc	ND	2.3	10		µg/L	1	12/4/2018 03:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **MB-71587** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/4/2018** RunNo: **130312**
Client ID: **PBW** Batch ID: **71587** TestNo: **EPA 200.8** Analysis Date: **12/4/2018** SeqNo: **3218924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Barium	ND	1.0									
Beryllium	ND	0.50									
Cadmium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.0									
Lead	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Nickel	ND	1.0									
Selenium	ND	0.50									
Silver	ND	0.50									
Thallium	ND	0.50									
Vanadium	0.335	1.0									
Zinc	ND	10									

Sample ID **LCS-71587** SampType: **LCS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/4/2018** RunNo: **130312**
Client ID: **LCSW** Batch ID: **71587** TestNo: **EPA 200.8** Analysis Date: **12/4/2018** SeqNo: **3218925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.634	0.50	10.00	0	96.3	85	115				
Arsenic	9.615	0.10	10.00	0	96.2	85	115				
Barium	10.199	1.0	10.00	0	102	85	115				
Beryllium	9.645	0.50	10.00	0	96.5	85	115				
Cadmium	10.026	0.50	10.00	0	100	85	115				
Cobalt	9.362	0.50	10.00	0	93.6	85	115				
Copper	10.100	1.0	10.00	0	101	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	LCS-71587	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	LCSW	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218925

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.608	1.0	10.00	0	96.1	85	115				
Manganese	101.994	0.50	100.0	0	102	85	115				
Molybdenum	9.283	0.50	10.00	0	92.8	85	115				
Nickel	10.069	1.0	10.00	0	101	85	115				
Selenium	9.864	0.50	10.00	0	98.6	85	115				
Silver	9.735	0.50	10.00	0	97.3	85	115				
Thallium	9.356	0.50	10.00	0	93.6	85	115				
Vanadium	10.140	1.0	10.00	0	101	85	115				
Zinc	9.856	10	10.00	0	98.6	85	115				

Sample ID	N033213-001E-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218929

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.924	0.50	10.00	0	99.2	75	125				
Arsenic	12.993	0.10	10.00	2.831	102	75	125				
Barium	25.136	1.0	10.00	16.38	87.5	75	125				
Beryllium	12.206	0.50	10.00	0	122	75	125				
Cadmium	9.603	0.50	10.00	0	96.0	75	125				
Cobalt	8.522	0.50	10.00	0	85.2	75	125				
Copper	3.505	1.0	10.00	0	35.1	75	125				S
Lead	9.677	1.0	10.00	0	96.8	75	125				
Manganese	98.284	0.50	100.0	2.113	96.2	75	125				
Molybdenum	23.429	0.50	10.00	12.35	111	75	125				
Nickel	9.507	1.0	10.00	0	95.1	75	125				
Selenium	13.527	0.50	10.00	3.808	97.2	75	125				
Silver	9.243	0.50	10.00	0	92.4	75	125				
Thallium	9.537	0.50	10.00	0	95.4	75	125				
Vanadium	13.526	1.0	10.00	3.867	96.6	75	125				
Zinc	4.020	10	10.00	0	40.2	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **N033213-001E-MSD** SampType: **MSD** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/4/2018** RunNo: **130312**
Client ID: **ZZZZZZ** Batch ID: **71587** TestNo: **EPA 200.8** Analysis Date: **12/4/2018** SeqNo: **3218930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.902	0.50	10.00	0	99.0	75	125	9.924	0.220	20	
Arsenic	12.684	0.10	10.00	2.831	98.5	75	125	12.99	2.40	20	
Barium	25.029	1.0	10.00	16.38	86.4	75	125	25.14	0.426	20	
Beryllium	12.190	0.50	10.00	0	122	75	125	12.21	0.134	20	
Cadmium	9.515	0.50	10.00	0	95.2	75	125	9.603	0.914	20	
Cobalt	8.516	0.50	10.00	0	85.2	75	125	8.522	0.0711	20	
Copper	3.454	1.0	10.00	0	34.5	75	125	3.505	1.47	20	S
Lead	9.587	1.0	10.00	0	95.9	75	125	9.677	0.930	20	
Manganese	98.851	0.50	100.0	2.113	96.7	75	125	98.28	0.575	20	
Molybdenum	23.092	0.50	10.00	12.35	107	75	125	23.43	1.45	20	
Nickel	9.416	1.0	10.00	0	94.2	75	125	9.507	0.964	20	
Selenium	13.520	0.50	10.00	3.808	97.1	75	125	13.53	0.0508	20	
Silver	9.179	0.50	10.00	0	91.8	75	125	9.243	0.696	20	
Thallium	9.431	0.50	10.00	0	94.3	75	125	9.537	1.12	20	
Vanadium	13.567	1.0	10.00	3.867	97.0	75	125	13.53	0.304	20	
Zinc	4.194	10	10.00	0	41.9	75	125	4.020	0	20	S

Sample ID **N033213-012E-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/4/2018** RunNo: **130312**
Client ID: **ZZZZZZ** Batch ID: **71587** TestNo: **EPA 200.8** Analysis Date: **12/4/2018** SeqNo: **3218943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.810	0.50	10.00	0	98.1	75	125				
Arsenic	11.364	0.10	10.00	1.055	103	75	125				
Barium	88.264	1.0	10.00	80.66	76.0	75	125				
Cadmium	9.337	0.50	10.00	0	93.4	75	125				
Cobalt	8.729	0.50	10.00	0	87.3	75	125				
Copper	3.374	1.0	10.00	0	33.7	75	125				S
Lead	9.591	1.0	10.00	0	95.9	75	125				
Manganese	98.588	0.50	100.0	1.730	96.9	75	125				
Molybdenum	27.804	0.50	10.00	17.37	104	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N033213-012E-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218943

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	12.190	1.0	10.00	2.893	93.0	75	125				
Selenium	13.836	0.50	10.00	4.018	98.2	75	125				
Silver	9.211	0.50	10.00	0	92.1	75	125				
Thallium	9.389	0.50	10.00	0	93.9	75	125				
Vanadium	12.387	1.0	10.00	2.414	99.7	75	125				
Zinc	5.919	10	10.00	0	59.2	75	125				S

Sample ID	N033213-012E-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218954

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	10.761	2.5	10.00	0	108	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-001

Client Sample ID: CW-02D-3V-Q418
Collection Date: 12/3/2018 2:25:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A** QC Batch: **R130277**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 11:50 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/4/2018 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-002

Client Sample ID: CW-02D-LF-Q418
Collection Date: 12/3/2018 1:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A** QC Batch: **R130277**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 11:59 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/4/2018 01:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-003

Client Sample ID: CW-02M-3V-Q418
Collection Date: 12/3/2018 2:04:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.96	0.033	0.20		µg/L	1	12/4/2018 12:09 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**			PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.3	0.13	1.0		µg/L	1	12/4/2018 01:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-004

Client Sample ID: CW-02M-LF-Q418
Collection Date: 12/3/2018 1:21:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A** QC Batch: **R130277**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.1	0.033	0.20		µg/L	1	12/4/2018 12:18 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	2.1	0.13	1.0		µg/L	1	12/4/2018 01:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-704-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 12:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.78	0.033	0.20		µg/L	1	12/4/2018 12:37 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**			PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.2	0.13	1.0		µg/L	1	12/4/2018 02:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-007

Client Sample ID: OW-01S-Q418
Collection Date: 12/3/2018 4:09:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A** QC Batch: **R130277**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	4.1	0.033	0.20		µg/L	1	12/4/2018 12:46 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	4.6	0.13	1.0		µg/L	1	12/4/2018 02:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.96	0.033	0.20		µg/L	1	12/4/2018 01:44 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**			PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	2.1	0.13	1.0		µg/L	1	12/4/2018 02:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-009

Client Sample ID: CW-01D-3V-Q418
Collection Date: 12/3/2018 2:24:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.29	0.033	0.20		µg/L	1	12/4/2018 01:56 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**			PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/4/2018 02:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-010

Client Sample ID: CW-01D-LF-Q418
Collection Date: 12/3/2018 1:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204A**	QC Batch: **R130277**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.29	0.033	0.20		µg/L	1	12/4/2018 02:05 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A**	QC Batch: **71587**			PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/4/2018 02:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-011

Client Sample ID: CW-01M-3V-Q418
Collection Date: 12/3/2018 2:18:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.4	0.033	0.20		µg/L	1	12/4/2018 04:27 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.5	0.13	1.0		µg/L	1	12/4/2018 02:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-012

Client Sample ID: CW-01M-LF-Q418
Collection Date: 12/3/2018 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.2	0.033	0.20		µg/L	1	12/4/2018 06:37 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	2.7	0.13	1.0		µg/L	1	12/4/2018 02:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-013

Client Sample ID: MW-900-Q418
Collection Date: 12/3/2018 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.3	0.033	0.20		µg/L	1	12/4/2018 07:43 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.3	0.13	1.0		µg/L	1	12/4/2018 02:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-014

Client Sample ID: CW-03D-3V-Q418
Collection Date: 12/3/2018 3:50:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 04:37 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.1	0.13	1.0		µg/L	1	12/4/2018 02:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-015

Client Sample ID: CW-03D-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.22	0.033	0.20		µg/L	1	12/4/2018 07:52 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	1.1	0.13	1.0		µg/L	1	12/4/2018 03:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-016

Client Sample ID: CW-03M-3V-Q418
Collection Date: 12/3/2018 3:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	3.9	0.033	0.20		µg/L	1	12/4/2018 06:18 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	4.8	0.13	1.0		µg/L	1	12/4/2018 03:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-017

Client Sample ID: CW-03M-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B** QC Batch: **R130310**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	3.3	0.033	0.20		µg/L	1	12/4/2018 06:27 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181204A** QC Batch: **71587**				PrepDate	**12/4/2018**		Analyst: **CEI**
Chromium	10	0.13	1.0		µg/L	1	12/4/2018 03:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-701-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:45:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-018		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B**	QC Batch: **R130310**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 08:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-702-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:10:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-019		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B**	QC Batch: **R130310**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 08:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-703-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:20:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-020		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181204B**	QC Batch: **R130310**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/4/2018 08:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_CrPGE

Sample ID	MB-71587	SampType:	MBLK	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	PBW	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218720

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	LCS-71587	SampType:	LCS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	LCSW	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218721

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.868	1.0	10.00	0	98.7	85	115				

Sample ID	N033213-001E-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218725

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.085	1.0	10.00	0.6851	94.0	75	125				

Sample ID	N033213-001E-MSD	SampType:	MSD	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218726

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.076	1.0	10.00	0.6851	93.9	75	125	10.09	0.0913	20	

Sample ID	N033213-012E-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130312
Client ID:	ZZZZZZ	Batch ID:	71587	TestNo:	EPA 200.8			Analysis Date:	12/4/2018	SeqNo:	3218739

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	12.176	1.0	10.00	2.739	94.4	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R130277	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	PBW	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID	LCS-R130277	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	LCSW	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.981	0.20	5.000	0	99.6	90	110				

Sample ID	N033211-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217620

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	219.238	4.0	100.0	120.2	99.1	90	110				

Sample ID	N033211-001AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	218.116	4.0	100.0	120.2	98.0	90	110	219.2	0.513	20	

Sample ID	N033209-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217622

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4383.700	100	2500	1956	97.1	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033209-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217623

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5504.900	100	2500	3015	99.6	90	110				

Sample ID	N033209-002ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3217626

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2936.750	100						3015	2.64	20	

Sample ID	N033213-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.136	0.20	1.000	0.1771	95.9	90	110				

Sample ID	N033213-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218625

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.118	0.20	1.000	0.1689	94.9	90	110				

Sample ID	N033213-003AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218626

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.032	0.20	1.000	0.9623	107	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033213-004AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218627

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.068	0.20	1.000	1.062	101	90	110				

Sample ID	N033213-005AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218628

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID	N033213-006AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.798	0.20	1.000	0.7817	102	90	110				

Sample ID	N033213-008AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218632

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.945	0.20	1.000	0.9601	98.5	90	110				

Sample ID	N033213-009AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.287	0.20	1.000	0.2934	99.4	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033213-010AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.367	0.20	1.000	0.2947	107	90	110				

Sample ID	N033213-007AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130277
Client ID:	ZZZZZZ	Batch ID:	R130277	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.080	0.20	5.000	4.077	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R130310	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310		
Client ID:	PBW	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218644		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium		ND	0.20										

Sample ID	LCS-R130310	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310		
Client ID:	LCSW	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218645		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium		4.973	0.20	5.000	0	99.5	90	110					

Sample ID	N033213-011AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310		
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218650		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium		2.351	0.20	1.000	1.369	98.3	90	110					

Sample ID	N033213-014AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310		
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218651		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium		1.205	0.20	1.000	0.1969	101	90	110					

Sample ID	N033213-014ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310		
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218653		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium		0.190	0.20						0.1969	0	20		

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033213-014AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218657

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.203	0.20	1.000	0.1969	101	90	110	1.205	0.174	20	

Sample ID	N033213-016AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218658

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.867	0.20	5.000	3.934	98.6	90	110				

Sample ID	N033213-017AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.442	0.20	5.000	3.305	103	90	110				

Sample ID	N033213-012AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218662

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.288	0.20	1.000	1.189	110	90	110				

Sample ID	N033213-015AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218668

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.294	0.20	1.000	0.2190	108	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033213-018AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218669

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID	N033213-019AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218670

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	106	90	110				

Sample ID	N033213-020AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID	N033213-013AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.351	0.20	1.000	1.342	101	90	110				

Sample ID	N033210-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218677

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0	103	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033212-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130310
Client ID:	ZZZZZZ	Batch ID:	R130310	TestNo:	EPA 218.6			Analysis Date:	12/4/2018	SeqNo:	3218678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.060	0.20	1.000	0	106	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.47	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.37	0.10	0.10		NTU	1	12/4/2018 06:15 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.41	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	1.2	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	3.3	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01S-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 4:09:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	3.7	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:31:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	11	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.16	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	1.4	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.14	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	11	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.15	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	0.79	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	1.1	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	19	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181204E**	QC Batch: **R130290**			PrepDate			Analyst: **LR**
Turbidity	7.3	0.10	0.10		NTU	1	12/4/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID	MB-R130290	SampType:	MBLK	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130290
Client ID:	PBW	Batch ID:	R130290	TestNo:	SM 2130B			Analysis Date:	12/4/2018	SeqNo:	3217956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID	N033213-001BDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130290
Client ID:	ZZZZZZ	Batch ID:	R130290	TestNo:	SM 2130B			Analysis Date:	12/4/2018	SeqNo:	3217958

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	0.480	0.10						0.4700	2.11	30	

Sample ID	N033213-012BDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130290
Client ID:	ZZZZZZ	Batch ID:	R130290	TestNo:	SM 2130B			Analysis Date:	12/4/2018	SeqNo:	3217969

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	10.550	0.10						10.61	0.567	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	61	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	63	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	60	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	59	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	83	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	76	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	74	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	89	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	88	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	91	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	62	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	65	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	52	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	32	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID **LCS-R130327**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **LCSW**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	93.882	5.0	100.0	0	93.9	85	115				

Sample ID **MB-R130327**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **PBW**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID **N033213-001BMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221505**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	158.228	5.0	100.0	61.18	97.0	75	125				

Sample ID **N033213-001BMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	156.118	5.0	100.0	61.18	94.9	75	125	158.2	1.34	20	

Sample ID **N033213-017BDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221520**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	32.700	5.0						31.65	3.28	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583**				PrepDate	**12/4/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 02:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 02:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 02:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 02:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 02:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181204A** QC Batch: **71583** PrepDate **12/4/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/4/2018 03:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_WD

Sample ID	MB-71583	SampType:	MBLK	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130292
Client ID:	PBW	Batch ID:	71583	TestNo:	EPA 245.1			Analysis Date:	12/4/2018	SeqNo:	3218019

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID	LCS-71583	SampType:	LCS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130292
Client ID:	LCSW	Batch ID:	71583	TestNo:	EPA 245.1			Analysis Date:	12/4/2018	SeqNo:	3218020

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.936	0.20	5.000	0	98.7	85	115				

Sample ID	N033138-001C-MS	SampType:	MS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130292
Client ID:	ZZZZZZ	Batch ID:	71583	TestNo:	EPA 245.1			Analysis Date:	12/4/2018	SeqNo:	3218021

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.847	0.20	5.000	0	96.9	75	125				

Sample ID	N033138-001C-MSD	SampType:	MSD	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	130292
Client ID:	ZZZZZZ	Batch ID:	71583	TestNo:	EPA 245.1			Analysis Date:	12/4/2018	SeqNo:	3218022

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	5.082	0.20	5.000	0	102	75	125	4.847	4.73	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-001

Client Sample ID: CW-02D-3V-Q418
Collection Date: 12/3/2018 2:25:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 04:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	1.8	0.013	0.20		mg/L	2	12/4/2018 09:19 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/4/2018 04:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-002

Client Sample ID: CW-02D-LF-Q418
Collection Date: 12/3/2018 1:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 04:50 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	1.8	0.013	0.20		mg/L	2	12/4/2018 09:35 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/4/2018 05:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 05:22 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.8	0.032	0.50		mg/L	5	12/4/2018 09:51 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/4/2018 05:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-004

Client Sample ID: CW-02M-LF-Q418
Collection Date: 12/3/2018 1:21:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 05:53 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	3.0	0.013	0.20		mg/L	2	12/4/2018 10:23 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/4/2018 06:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 10:53 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.3	0.032	0.50		mg/L	5	12/4/2018 10:07 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/4/2018 11:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-007

Client Sample ID: OW-01S-Q418
Collection Date: 12/3/2018 4:09:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	1900	4.6	250		mg/L	500	12/4/2018 06:57 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	0.94	0.032	0.50		mg/L	5	12/4/2018 10:38 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	430	1.1	25		mg/L	50	12/4/2018 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-008

Client Sample ID: OW-02M-Q418
Collection Date: 12/3/2018 3:31:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 11:25 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.1	0.032	0.50		mg/L	5	12/4/2018 10:54 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/4/2018 11:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 11:57 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	12/4/2018 11:10 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 12:12 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-010

Client Sample ID: CW-01D-LF-Q418
Collection Date: 12/3/2018 1:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 12:28 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	12/4/2018 11:57 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 01:16 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 01:31 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.032	0.50		mg/L	5	12/4/2018 12:13 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 01:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-012

Client Sample ID: CW-01M-LF-Q418
Collection Date: 12/3/2018 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/4/2018 08:31 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.1	0.032	0.50		mg/L	5	12/4/2018 12:29 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	460	1.1	25		mg/L	50	12/5/2018 04:41 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-013

Client Sample ID: MW-900-Q418
Collection Date: 12/3/2018 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 02:03 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.1	0.032	0.50		mg/L	5	12/4/2018 12:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 02:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-014

Client Sample ID: CW-03D-3V-Q418
Collection Date: 12/3/2018 3:50:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 02:35 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	2.3	0.013	0.20		mg/L	2	12/4/2018 01:01 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 02:50 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-015

Client Sample ID: CW-03D-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**			PrepDate				Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 03:06 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**			PrepDate				Analyst: **RAB**
Fluoride	2.3	0.013	0.20		mg/L	2	12/4/2018 01:16 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**			PrepDate				Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 03:22 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-016

Client Sample ID: CW-03M-3V-Q418
Collection Date: 12/3/2018 3:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2300	4.6	250		mg/L	500	12/4/2018 09:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	3.5	0.032	0.50		mg/L	5	12/4/2018 01:32 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	510	1.1	25		mg/L	50	12/4/2018 10:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033213
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033213-017

Client Sample ID: CW-03M-LF-Q418
Collection Date: 12/3/2018 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Chloride	2300	4.6	250		mg/L	500	12/5/2018 03:38 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Fluoride	3.4	0.032	0.50		mg/L	5	12/4/2018 01:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181204A** QC Batch: **R130305**				PrepDate			Analyst: **RAB**
Sulfate	530	1.1	25		mg/L	50	12/5/2018 04:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R130305_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	PBW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218368

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R130305_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	LCSW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218369

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.948	0.50	2.000	0	97.4	90	110				

Sample ID	N033213-007BMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2913.150	250	1000	1904	101	80	120				

Sample ID	N033213-007BMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218382

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2943.050	250	1000	1904	104	80	120	2913	1.02	20	

Sample ID	N033213-012BMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218384

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3085.100	250	1000	2086	99.9	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	N033213-016BDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218388

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2286.800	250						2284	0.123	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	MB-R130305_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	PBW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218328

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	LCS-R130305_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	LCSW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218329

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.218	0.10	1.250	0	97.4	90	110				

Sample ID	N033213-008BMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218348

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	7.904	0.50	6.250	2.136	92.3	80	120				

Sample ID	N033213-008BMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218349

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	7.943	0.50	6.250	2.136	92.9	80	120	7.904	0.499	20	

Sample ID	N033213-012BMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218352

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	7.728	0.50	6.250	2.086	90.3	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N033213-003BDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218353

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.921	0.50						2.818	3.61	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R130305_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	PBW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218408

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID	LCS-R130305_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	LCSW	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218409

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.961	0.50	4.000	0	99.0	90	110				

Sample ID	N033213-007BMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218421

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	637.295	25	200.0	431.1	103	80	120				

Sample ID	N033213-007BMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218422

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	630.655	25	200.0	431.1	99.8	80	120	637.3	1.05	20	

Sample ID	N033213-001BMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218423

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	686.270	25	200.0	478.7	104	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	N033213-016BDUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130305
Client ID:	ZZZZZZ	Batch ID:	R130305	TestNo:	EPA 300.0			Analysis Date:	12/4/2018	SeqNo:	3218427

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	502.890	25						508.7	1.15	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM 5310C				
RunID: **TOC2_181204A**	QC Batch: **R130296**			PrepDate			Analyst: **QBM**
Organic Carbon, Total	ND	0.36	10		mg/L	10	12/4/2018 12:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM 5310C				
RunID: **TOC2_181204A**	QC Batch: **R130296**			PrepDate			Analyst: **QBM**
Organic Carbon, Total	ND	0.36	10		mg/L	10	12/4/2018 12:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM 5310C				
RunID: **TOC2_181204A**	QC Batch: **R130296**			PrepDate			Analyst: **QBM**
Organic Carbon, Total	ND	0.36	10		mg/L	10	12/4/2018 02:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ORGANIC CARBON							
			SM 5310C				
RunID: **TOC2_181204A**	QC Batch: **R130296**			PrepDate			Analyst: **QBM**
Organic Carbon, Total	ND	0.36	10		mg/L	10	12/4/2018 02:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID	MB-R130296	SampType:	MBLK	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296		
Client ID:	PBW	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218203		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Organic Carbon, Total	ND	1.0											

Sample ID	LCS-R130296	SampType:	LCS	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296		
Client ID:	LCSW	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218204		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Organic Carbon, Total	4.713	1.0	5.000	0	94.3	85	115						

Sample ID	N033213-014EMS	SampType:	MS	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296		
Client ID:	ZZZZZZ	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218215		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Organic Carbon, Total	34.210	10	50.00	0	68.4	75	125				S		

Sample ID	N033213-014EMSD	SampType:	MSD	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296		
Client ID:	ZZZZZZ	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218216		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Organic Carbon, Total	32.885	10	50.00	0	65.8	75	125	34.21	3.95	20	S		

Sample ID	N033213-015EMS	SampType:	MS	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296		
Client ID:	ZZZZZZ	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218222		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Organic Carbon, Total	33.109	10	50.00	0	66.2	75	125				S		

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID	N033213-016EMS	SampType:	MS	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296
Client ID:	ZZZZZZ	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218223

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	32.261	10	50.00	0	64.5	75	125				S

Sample ID	N033213-017EMS	SampType:	MS	TestCode:	5310C_W_T	Units:	mg/L	Prep Date:		RunNo:	130296
Client ID:	ZZZZZZ	Batch ID:	R130296	TestNo:	SM 5310C			Analysis Date:	12/4/2018	SeqNo:	3218224

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	32.075	10	50.00	0	64.2	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:25:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 07:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:29:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 09:56 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:04:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**			PrepDate	**12/4/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 10:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-02M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:21:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	120	18	20		ug/L	1	12/4/2018 10:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01M-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:28:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**			PrepDate	**12/4/2018**		Analyst: **CEI**
Iron	85	18	20		ug/L	1	12/4/2018 10:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:24:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 10:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:35:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	29	18	20		ug/L	1	12/4/2018 10:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:18:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**			PrepDate	**12/4/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 10:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-01M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 1:41:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	370	18	20		ug/L	1	12/4/2018 10:55 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-900-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 2:23:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**			PrepDate	**12/4/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 11:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:50:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/4/2018 11:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03D-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**			PrepDate	**12/4/2018**		Analyst: **CEI**
Iron	ND	18	20		ug/L	1	12/5/2018 12:03 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-3V-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:40:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	740	18	20		ug/L	1	12/5/2018 12:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-03M-LF-Q418
Lab Order:	N033213	**Collection Date:**	12/3/2018 3:00:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033213-017		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181204B**	QC Batch: **71584**				PrepDate	**12/4/2018**	Analyst: **CEI**
Iron	74	18	20		ug/L	1	12/5/2018 12:18 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033213
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	MB-71584	SampType:	MBLK	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/4/2018	RunNo:	130307
Client ID:	PBW	Batch ID:	71584	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/4/2018	SeqNo:	3218487

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID	LCS1-71584	SampType:	LCS	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/4/2018	RunNo:	130307
Client ID:	LCSW	Batch ID:	71584	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/4/2018	SeqNo:	3218488

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	93.359	20	100.0	0	93.4	85	115				

Sample ID	N033213-001F-MS1	SampType:	MS	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/4/2018	RunNo:	130307
Client ID:	ZZZZZZ	Batch ID:	71584	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/4/2018	SeqNo:	3218492

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	100.281	20	100.0	0	100	75	125				

Sample ID	N033213-001F-MSD	SampType:	MSD	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/4/2018	RunNo:	130307
Client ID:	ZZZZZZ	Batch ID:	71584	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/4/2018	SeqNo:	3218493

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	99.906	20	100.0	0	99.9	75	125	100.3	0.375	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661	Email to: mbloes@pivox.com	Labspec	CalTrans	2. Headspace
Submitted By: Gantt Jeffers		Phone: 949-727-1400, ext 200	Others ✓	LEVEL III	3. Container Intact
Title: Geologist	Phone: 916-786-3302 Fax:	Fax:	Specify: RWQCB	LEVEL IV	4. Seal Present
Signature: Date: 12/3/2018	Sampled By: Jason Mahn	P.O.# SWA-ASSET-C9817-051		Regulatory	5. IR number ~
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.		Global ID:	Specify State:	6. Method of Cooling: ice
Project Name: PG&E Topock - CMP	Signature: Date: 12/3/2018				Sample Temp: 2.1°C 0-1°C 2-6
Project Number: RC000753.801D					Courier: Tracking No.:

Matrix: Groundwater x | Potable | NPDES | Surface | Sediment | Soil | Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH	Anions (E300.0); Chloride, Fluoride, Sulfate	Specific Conductance (E120.1)	TDS (SM2540C)	Alkalinity (Total, reported as CaCO3) (SM2320B)	Turbidity (SM2130B)	Ammonia as Nitrogen (SM4500-NH3D); H2SO4	Nitrate/Nitrite as Nitrogen (SM4500-N03); H2SO4	MST_CMP_TOC, (SM5310B), H2SO4	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na	Dissolved metals (EPA200.7) FF; HNO3 Na	Dissolved metals (EPA 245.1); HNO3 Mercury	Total Iron (SW6010B), HNO3	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
						250 mL poly	1 liter poly	1 liter poly	1 liter poly	1 liter poly	1 liter poly	1 L poly	125 mL poly	3 X VOAs	500 mL poly	500 mL poly	500 mL poly	500 mL poly	500 mL poly	500 mL poly					
1	N033213-01	CW-02D-3V-Q418	12/3/2018	14:25		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
2	-02	CW-02D-LF-Q418	12/3/2018	13:29		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
3	-03	CW-02M-3V-Q418	12/3/2018	14:04		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
4	-04	CW-02M-LF-Q418	12/3/2018	13:21		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
5	-05	MW-704-Q418	12/3/2018	15:50		x															C	1	P	B	48 Hr TAT
6	-06	OW-01M-Q418	12/3/2018	15:28		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
7	-07	OW-01S-Q418	12/3/2018	16:09		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
8	-08	OW-02M-Q418	12/3/2018	15:31		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
9	-09	CW-01D-3V-Q418	12/3/2018	14:24		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
10	-10	CW-01D-LF-Q418	12/3/2018	13:35		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	12/3/18 1650		12/3/18 1650
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	12/3/18 1719		12/3/18 1919
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
X	C	= 2 Workdays
	D	= 3 Workdays
	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs =200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level II Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement		QA/QC		Sample Receipt Condition	Y	N
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	Excel EDD		RTNE		1. Chilled		
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker		RWQCB	✓	2. Headspace		
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com	Labspec		CalTrans		3. Container Intact		
Submitted By: Gantt Jeffers		Phone: 949-727-1400, ext 200	Others	✓	LEVEL III		4. Seal Present		
Title: Geologist	Phone: 916-786-3302 Fax:	P.O.# SWA-ASSET-C9817-051	Specify: RWQCB		LEVEL IV		5. IR number		
		Fax:	Global ID:		Regulatory		6. Method of Cooling:		
					Specify State:		Sample Temp. 2.9°C / 3.1°C / 2.6°C		

Signature: Date: 12/3/2018
I hereby authorize ASSET Labs to perform the tests indicated below.

Sampled By: Jason Mahn
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Project Name: PG&E Topock - CMP
Signature: Date: 12/3/2018
Project Number: RC000753.801D

Matrix: Ground-water x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Courier:
Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH 250 mL poly	Anions (E300.0); Chloride, Fluoride, Sulfate 1 liter poly	Specific Conductance (E120.1) 1 liter poly	TDS (SM2540C) 1 liter poly	Alkalinity (Total, reported as CaCO3) (SM2320B) 1 liter poly	Turbidity (SM2130B) 1 liter poly	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500-N03); H2SO4 125 mL poly	MST_CMP_TOC, (SM5310B), H2SO4 3 X VOAs	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn 500 mL poly	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo 500 mL poly	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na 500 mL poly	Dissolved metals (EPA200.7) FF; HNO3 Na 500 mL poly	Dissolved metals (EPA 245.1); HNO3 Mercury 500 mL poly	Total Iron (SW6010B); HNO3 500 mL poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N033213-11	CW-01M-3V-Q418	12/3/2018	14:18		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
2	-12	CW-01M-LF-Q418	12/3/2018	13:41		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
3	-13	MW-900-Q418	12/3/2018	14:23		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
4	-14	CW-03D-3V-Q418	12/3/2018	15:50		x	x	x	x	x	x	x	x	x	x		x		x	x	C	9	PV	BNS	48 Hr TAT
5	-15	CW-03D-LF-Q418	12/3/2018	15:00		x	x	x	x	x	x	x	x	x	x		x		x	x	C	9	PV	BNS	48 Hr TAT
6	-16	CW-03M-3V-Q418	12/3/2018	15:40		x	x	x	x	x	x	x	x	x	x		x		x	x	C	9	PV	BNS	48 Hr TAT
7	-17	CW-03M-LF-Q418	12/3/2018	15:00		x	x	x	x	x	x	x	x	x	x		x		x	x	C	9	PV	BNS	48 Hr TAT
8	-18	MW-701-Q418	12/3/2018	15:45		x															C	1	P	B	48 Hr TAT
9	-19	MW-702-Q418	12/3/2018	16:10		x															C	1	P	B	48 Hr TAT
10	-20	MW-703-Q418	12/3/2018	16:20		x															C	1	P	B	48 Hr TAT

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	12/3/18 1650		12/3/18 1650
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	12/3/18 1919		12/3/18 1919
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
X	C	= 2 Workdays
	D	= 3 Workdays
	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Poly
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B	(NH4)2SO4/NH4OH		M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	12/3/2018	Workorder:	N033213
Rep sample Temp (Deg C):	2.9/3.1/2.6	IR Gun ID:	2
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: YR 12/4/2018

Reviewed By: LG 120418

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-001A	CW-02D-3V-Q418	12/3/2018 2:25:00 PM	12/5/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-001B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-001C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-001D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-001E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-001F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-002A	CW-02D-LF-Q418	12/3/2018 1:29:00 PM	12/5/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-002B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-002C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-002D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-002E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-002F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-003A	CW-02M-3V-Q418	12/3/2018 2:04:00 PM	12/5/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-003B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-003C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-003D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-003E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-003F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-004A	CW-02M-LF-Q418	12/3/2018 1:21:00 PM	12/5/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-004B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-004C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-004D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-004E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-004F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-005A	MW-704-Q418	12/3/2018 3:50:00 PM	12/5/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-006A	OW-01M-Q418	12/3/2018 3:28:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-006B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-006C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-006D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-006E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-006F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-006F	OW-01M-Q418	12/3/2018 3:28:00 PM	12/5/2018	Groundwater	EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-007A	OW-01S-Q418	12/3/2018 4:09:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-007B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033213-007C			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-007D			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033213-008A	OW-02M-Q418	12/3/2018 3:31:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-008B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-008B	OW-02M-Q418	12/3/2018 3:31:00 PM	12/5/2018	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033213-008C			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-008D			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033213-009A	CW-01D-3V-Q418	12/3/2018 2:24:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-009B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-009C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-009D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-009E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-009E	CW-01D-3V-Q418	12/3/2018 2:24:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-009F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-010A	CW-01D-LF-Q418	12/3/2018 1:35:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-010B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-010C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-010D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-010E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-010E	CW-01D-LF-Q418	12/3/2018 1:35:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-010F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-011A	CW-01M-3V-Q418	12/3/2018 2:18:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-011B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-011C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-011D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-011E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-011E	CW-01M-3V-Q418	12/3/2018 2:18:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-011F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-012A	CW-01M-LF-Q418	12/3/2018 1:41:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-012B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-012C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-012D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-012E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-012E	CW-01M-LF-Q418	12/3/2018 1:41:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-012F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-013A	MW-900-Q418	12/3/2018 2:23:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-013B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-013C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-013D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-013E			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-013E	MW-900-Q418	12/3/2018 2:23:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-013F			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-014A	CW-03D-3V-Q418	12/3/2018 3:50:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-014B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-014C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-014D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-014E			12/5/2018		SM 5310C	TOTAL ORGANIC CARBON	☐	☐	☐	VW
N033213-014F			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-014F	CW-03D-3V-Q418	12/3/2018 3:50:00 PM	12/5/2018	Groundwater	EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-014G			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-015A	CW-03D-LF-Q418	12/3/2018 3:00:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-015B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-015C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-015D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-015E			12/5/2018		SM 5310C	TOTAL ORGANIC CARBON	☐	☐	☐	VW

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-015F	CW-03D-LF-Q418	12/3/2018 3:00:00 PM	12/5/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-015G			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-016A	CW-03M-3V-Q418	12/3/2018 3:40:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-016B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-016C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033213-016D			12/5/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-016E	CW-03M-3V-Q418	12/3/2018 3:40:00 PM	12/5/2018	Groundwater	SM 5310C	TOTAL ORGANIC CARBON	☐	☐	☐	VW
N033213-016F			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-016G			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-017A	CW-03M-LF-Q418	12/3/2018 3:00:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-017B			12/5/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/5/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/5/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/5/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/5/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/5/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033213-017C			12/5/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB

ASSET Laboratories

WORK ORDER Summary

04-Dec-18

WorkOrder: N033213

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/3/2018

Comments: EDD RWQCB

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033213-017D	CW-03M-LF-Q418	12/3/2018 3:00:00 PM	12/5/2018	Groundwater	SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033213-017E			12/5/2018		SM 5310C	TOTAL ORGANIC CARBON	☐	☐	☐	VW
N033213-017F			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/5/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/5/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/5/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/5/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033213-017G			12/5/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/5/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033213-018A	MW-701-Q418	12/3/2018 3:45:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-019A	MW-702-Q418	12/3/2018 4:10:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-020A	MW-703-Q418	12/3/2018 4:20:00 PM	12/5/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033213-021A	FOLDER	12/5/2018	12/5/2018		EDD	RWQCB	☐	☐	☐	LAB
			12/5/2018		Folder	Folder	☐	☐	☐	LAB
			12/5/2018		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Jason Mahn

04-Dec-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM4500-NH3D		
N033213-001C / CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	32OZP	1		
N033213-002C / CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	32OZP	1		
N033213-003C / CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	32OZP	1		
N033213-004C / CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	32OZP	1		
N033213-006C / OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	32OZP	1		
N033213-009C / CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	32OZP	1		
N033213-010C / CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	32OZP	1		
N033213-011C / CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	32OZP	1		
N033213-012C / CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	32OZP	1		
N033213-013C / MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	32OZP	1		
N033213-014C / CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	32OZP	1		
N033213-015C / CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	32OZP	1		
N033213-016C / CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	32OZP	1		
N033213-017C / CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	32OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33213A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.

Please analyze for Ammonia by SM4500NH3D. EDD requirerement Labspec7 edata.

GSO #: 542994491

	Date/Time		Date/Time
Relinquished by:	12/4/2018 17:00	**Received by:**	
Relinquished by:		**Received by:**	

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3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841

TEL: +1 714 895 5494
FAX:
Acct #:

Field Sampler: Jason Mahn

04-Dec-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM4500-NO3F		
N033213-001D / CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	4OZP	1		
N033213-002D / CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	4OZP	1		
N033213-003D / CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	4OZP	1		
N033213-004D / CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	4OZP	1		
N033213-006D / OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	4OZP	1		
N033213-007C / OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	4OZP	1		
N033213-008C / OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	4OZP	1		
N033213-009D / CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	4OZP	1		
N033213-010D / CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	4OZP	1		
N033213-011D / CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	4OZP	1		
N033213-012D / CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	4OZP	1		
N033213-013D / MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	4OZP	1		
N033213-014D / CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	4OZP	1		
N033213-015D / CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	4OZP	1		
N033213-016D / CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	4OZP	1		
N033213-017D / CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	4OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

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Please analyze for NO3- by SM4500. EDD Requireement Labspec7 edata.

GSO #: 542987634

		Date/Time		Date/Time
Relinquished by:		12/4/2018 17:00	**Received by:**	
Relinquished by:			**Received by:**	

Subject: RE: TOC for CMP samples
From: Daniel Moore <Daniel.Moore@critigen.com>
Date: 12/5/2018 11:01 AM
To: Quennie Manimtim <quennie@assetlaboratories.com>, "'Marlon B. Cartin'" <marlon@assetlaboratories.com>
CC: "nancy@assetlaboratories.com" <nancy@assetlaboratories.com>

Understood, report the sample analysis at 10X.

Thanks!

From: Quennie Manimtim <quennie@assetlaboratories.com>
Sent: Wednesday, December 5, 2018 12:59 PM
To: Daniel Moore <Daniel.Moore@critigen.com>; 'Marlon B. Cartin' <marlon@assetlaboratories.com>
Cc: nancy@assetlaboratories.com
Subject: RE: TOC for CMP samples

Hi Dan,

Recoveries without dilution is less than 10%. We will report at dilution with ~60% recoveries, correction, these were at 10X and not at 5X.

Thanks,
Quennie

From: Daniel Moore [mailto:Daniel.Moore@critigen.com]
Sent: Wednesday, December 05, 2018 10:41 AM
To: Marlon B. Cartin
Cc: 'Quennie Manimtim'; nancy@assetlaboratories.com
Subject: RE: TOC for CMP samples

HI Marlon

If the samples run neat have MS/SD recoveries greater than 30% report those. If not, report the 5X with the ~60% recoveries.

Thanks
Dan

From: Marlon B. Cartin <marlon@assetlaboratories.com>
Sent: Wednesday, December 5, 2018 12:02 PM
To: Daniel Moore <Daniel.Moore@critigen.com>
Cc: 'Quennie Manimtim' <quennie@assetlaboratories.com>; nancy@assetlaboratories.com
Subject: TOC for CMP samples

Hi Dan,

We would like to consult you an issue regarding TOC analysis of CMP samples. Below are the analytical

scenarios;

1. We run the samples straight but the MS/MSD recoveries are too low.
2. We run the samples at 5X and the MS/MSD recoveries are at 60%
3. We run the samples at 50X and the MS recovery passed. However, we ran out of sample to run MSD.
4. At all dilutions, samples are ND for TOC.

Please advice which analytical run you want us to report.

Thanks,

Marlon Cartin
Project Manager
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421
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Date of Report: 12/07/2018

Marlon Cartin

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	N033213
BCL Project:	Level IV
BCL Work Order:	1837817
Invoice ID:	B324481

Enclosed are the results of analyses for samples received by the laboratory on 12/5/2018. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000826901

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

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Chain of Custody and Cooler Receipt Form for 1837817 Page 1 of 3

ASSET Laboratories
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18-37817

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

RUSH!!

QC Level: Level IV

Field Sampler: Jason Mahn

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

04-Dec-18

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
					SM4500-NH3D	
-1	N033213-001C / CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	32OZP	1	
-2	N033213-002C / CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	32OZP	1	
-3	N033213-003C / CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	32OZP	1	
-4	N033213-004C / CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	32OZP	1	
-5	N033213-006C / OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	32OZP	1	
-6	N033213-009C / CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	32OZP	1	
-7	N033213-010C / CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	32OZP	1	
-8	N033213-011C / CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	32OZP	1	
-9	N033213-012C / CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	32OZP	1	
-10	N033213-013C / MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	32OZP	1	
-11	N033213-014C / CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	32OZP	1	
-12	N033213-015C / CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	32OZP	1	
-13	N033213-016C / CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	32OZP	1	
-14	N033213-017C / CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	32OZP	1	

CHK BY

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SUB-OUT

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33213A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lw@assetlaboratories.com by: 1-day TAT.

Please analyze for Ammonia by SM4500NH3D. EDD requirement Labspec7 edata.

GSO #: 542994491

	Date/Time		Date/Time
Relinquished by:	12/4/2018 17:00	Received by:	12.5.18 08:50
Relinquished by:		Received by:	

Chain of Custody and Cooler Receipt Form for 1837817 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 18-37817

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☐ (Specify) GSO	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

☒ COC Received YES ☐ NO

Emissivity: .97 Container: Pkg Thermometer ID: 214 Date/Time 8.5.18

Temperature: (A) 0.0 °C / (C) 0.0 °C Analyst Init AD 08:50

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A	A	A	A	A	A	A
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 8/5/18 1030

A = Actual / C = Corrected

Rev 21 05/23/2016

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Chain of Custody and Cooler Receipt Form for 1837817 Page 3 of 3

BC LABORATORIES INC. — COOLER RECEIPT FORM — Page 2 of 2

Submission #: 18-37817

SHIPPING INFORMATION: Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☐ (Specify) GSO

SHIPPING CONTAINER: Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)

FREE LIQUID: YES ☐ NO ☐ W / S

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .97 Container: Paper Thermometer ID: 274 Date/Time: 2.5.18

Temperature: (A) 0.0 °C / (C) 0.0 °C Analyst Init: 08:50

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A						
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: Date/Time: 2/5/18 1030

A = Actual / C = Corrected

Rev 21 05/23/2016

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1837817-01	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 14:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-001C / CW-02D-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-02	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 13:29
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-002C / CW-02D-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-03	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 14:04
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-003C / CW-02M-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-04	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 13:21
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-004C / CW-02M-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-05	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 15:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-006C / OW-01M-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-06	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 14:24
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-009C / CW-01D-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-07	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-010C / CW-01D-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater

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3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1837817-08	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 14:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-011C / CW-01M-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-09	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 13:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-012C / CW-01M-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-10	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 14:23
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-013C / MW-900-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-11	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 15:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-014C / CW-03D-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-12	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 15:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-015C / CW-03D-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-13	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 15:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-016C / CW-03M-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater
1837817-14	**COC Number:**	---	**Receive Date:**	12/05/2018 08:50
	Project Number:	---	**Sampling Date:**	12/03/2018 15:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033213-017C / CW-03M-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	Jason Mahn	**Sample Type:**	Groundwater

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-01 | **Client Sample Name:** N033213-001C / CW-02D-3V-Q418, 12/3/2018 2:25:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:37	JMH	SC-1	1	B032121

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Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-02 | **Client Sample Name:** N033213-002C / CW-02D-LF-Q418, 12/3/2018 1:29:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:40	JMH	SC-1	1	B032121

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Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-03 | **Client Sample Name:** N033213-003C / CW-02M-3V-Q418, 12/3/2018 2:04:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:42	JMH	SC-1	1	B032121

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3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-04 | **Client Sample Name:** N033213-004C / CW-02M-LF-Q418, 12/3/2018 1:21:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:44	JMH	SC-1	1	B032121

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Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-05 | **Client Sample Name:** N033213-006C / OW-01M-Q418, 12/3/2018 3:28:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:45	JMH	SC-1	1	B032121

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Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-06 | **Client Sample Name:** N033213-009C / CW-01D-3V-Q418, 12/3/2018 2:24:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:46	JMH	SC-1	1	B032121

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Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-07 | **Client Sample Name:** N033213-010C / CW-01D-LF-Q418, 12/3/2018 1:35:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:47	JMH	SC-1	1	B032121

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Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-08 | **Client Sample Name:** N033213-011C / CW-01M-3V-Q418, 12/3/2018 2:18:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:47	JMH	SC-1	1	B032121

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-09 | **Client Sample Name:** N033213-012C / CW-01M-LF-Q418, 12/3/2018 1:41:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:49	JMH	SC-1	1	B032121

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-10 | **Client Sample Name:** N033213-013C / MW-900-Q418, 12/3/2018 2:23:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:49	JMH	SC-1	1	B032121

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-11 | **Client Sample Name:** N033213-014C / CW-03D-3V-Q418, 12/3/2018 3:50:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:31	12/06/18 13:53	JMH	SC-1	1	B032122

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ASSET Laboratories- Las Vegas
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Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-12 | **Client Sample Name:** N033213-015C / CW-03D-LF-Q418, 12/3/2018 3:00:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:34	12/06/18 13:58	JMH	SC-1	1	B032122

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-13 | **Client Sample Name:** N033213-016C / CW-03M-3V-Q418, 12/3/2018 3:40:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:34	12/06/18 13:58	JMH	SC-1	1	B032122

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837817-14 | **Client Sample Name:** N033213-017C / CW-03M-LF-Q418, 12/3/2018 3:00:00PM, Jason Mahn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/06/18 08:34	12/06/18 14:00	JMH	SC-1	1	B032122

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B032121						
Ammonia as N (Distilled)	B032121-BLK1	ND	mg/L	0.20		
QC Batch ID: B032122						
Ammonia as N (Distilled)	B032122-BLK1	ND	mg/L	0.20		

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B032121										
Ammonia as N (Distilled)	B032121-BS1	LCS	1.0973	1.0000	mg/L	110		85 - 115		
QC Batch ID: B032122										
Ammonia as N (Distilled)	B032122-BS1	LCS	0.95860	1.0000	mg/L	95.9		85 - 115		

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B032121	Used client sample: Y - Description: N033213-001C / CW-02D-3V-Q418, 12/03/2018 14:25										
Ammonia as N (Distilled)	DUP	1837817-01	0.057700	ND		mg/L			20		
	MS	1837817-01	0.057700	1.1826	1.1111	mg/L		101		80 - 120	
	MSD	1837817-01	0.057700	1.1341	1.1111	mg/L	4.2	96.9	20	80 - 120	
QC Batch ID: B032122	Used client sample: Y - Description: N033213-014C / CW-03D-3V-Q418, 12/03/2018 15:50										
Ammonia as N (Distilled)	DUP	1837817-11	ND	ND		mg/L			20		
	MS	1837817-11	ND	1.1597	1.1111	mg/L		104		80 - 120	
	MSD	1837817-11	ND	1.1588	1.1111	mg/L	0.1	104	20	80 - 120	

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/07/2018 9:04
Project: Level IV
Project Number: N033213
Project Manager: Marlon Cartin

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

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WORK ORDER NUMBER: 18-12-0352

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Asset Laboratories

Client Project Name: N033213

Attention: Marlon Cartin
3151 West Post Road
Las Vegas, NV 89118-3859

Approved for release on 12/06/2018 by:
Don Burley
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Contents

Client Project Name: N033213
Work Order Number: 18-12-0352

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Work Order Narrative

Work Order: 18-12-0352 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/05/18. They were assigned to Work Order 18-12-0352.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Return to Contents

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Sample Summary

Client:	Asset Laboratories	Work Order:	18-12-0352
	3151 West Post Road	Project Name:	N033213
	Las Vegas, NV 89118-3859	PO Number:	N33213B
		Date/Time Received:	12/05/18 10:25
		Number of Containers:	16
Attn:	Marlon Cartin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
N33213-001D / CW-02D-3V-Q418	18-12-0352-1	12/03/18 14:45	1	Aqueous
N33213-002D / CW-02D-LF-Q418	18-12-0352-2	12/03/18 13:29	1	Aqueous
N33213-003D / CW-02M-3V-Q418	18-12-0352-3	12/03/18 14:04	1	Aqueous
N33213-004D / CW-02M-LF-Q418	18-12-0352-4	12/03/18 13:21	1	Aqueous
N33213-006D / OW-01M-Q418	18-12-0352-5	12/03/18 15:28	1	Aqueous
N33213-007D / OW-01S-Q418	18-12-0352-6	12/03/18 16:09	1	Aqueous
N33213-008D / OW-02M-Q418	18-12-0352-7	12/03/18 15:31	1	Aqueous
N33213-009D / CW-01D-3V-Q418	18-12-0352-8	12/03/18 14:24	1	Aqueous
N33213-010D / CW-01D-LF-Q418	18-12-0352-9	12/03/18 13:35	1	Aqueous
N33213-011D / CW-01M-3V-Q418	18-12-0352-10	12/03/18 14:18	1	Aqueous
N33213-012D / CW-01M-LF-Q418	18-12-0352-11	12/03/18 13:41	1	Aqueous
N33213-013D / MW-900-Q418	18-12-0352-12	12/03/18 14:23	1	Aqueous
N33213-014D / CW-03D-3V-Q418	18-12-0352-13	12/03/18 15:50	1	Aqueous
N33213-015D / CW-03D-LF-Q418	18-12-0352-14	12/03/18 15:00	1	Aqueous
N33213-016D / CW-03M-3V-Q418	18-12-0352-15	12/03/18 15:40	1	Aqueous
N33213-017D / CW-03M-LF-Q418	18-12-0352-16	12/03/18 15:00	1	Aqueous

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Analytical Report

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033213

Date Received: 12/05/18
Work Order: 18-12-0352
Preparation: N/A
Method: SM 4500-NO3 E
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-001D / CW-02D-3V-Q418	**18-12-0352-1-A**	**12/03/18 14:45**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-002D / CW-02D-LF-Q418	**18-12-0352-2-A**	**12/03/18 13:29**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-003D / CW-02M-3V-Q418	**18-12-0352-3-A**	**12/03/18 14:04**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-004D / CW-02M-LF-Q418	**18-12-0352-4-A**	**12/03/18 13:21**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-006D / OW-01M-Q418	**18-12-0352-5-A**	**12/03/18 15:28**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-007D / OW-01S-Q418	**18-12-0352-6-A**	**12/03/18 16:09**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-008D / OW-02M-Q418	**18-12-0352-7-A**	**12/03/18 15:31**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.6	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-009D / CW-01D-3V-Q418	**18-12-0352-8-A**	**12/03/18 14:24**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.5	1.0	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033213

Date Received: 12/05/18
Work Order: 18-12-0352
Preparation: N/A
Method: SM 4500-NO3 E
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-010D / CW-01D-LF-Q418	**18-12-0352-9-A**	**12/03/18 13:35**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-011D / CW-01M-3V-Q418	**18-12-0352-10-A**	**12/03/18 14:18**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-012D / CW-01M-LF-Q418	**18-12-0352-11-A**	**12/03/18 13:41**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-013D / MW-900-Q418	**18-12-0352-12-A**	**12/03/18 14:23**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-014D / CW-03D-3V-Q418	**18-12-0352-13-A**	**12/03/18 15:50**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.7	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-015D / CW-03D-LF-Q418	**18-12-0352-14-A**	**12/03/18 15:00**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.6	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-016D / CW-03M-3V-Q418	**18-12-0352-15-A**	**12/03/18 15:40**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.3	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N33213-017D / CW-03M-LF-Q418	**18-12-0352-16-A**	**12/03/18 15:00**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.4	1.0	10.0	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Asset Laboratories		Date Received:	12/05/18
3151 West Post Road		Work Order:	18-12-0352
Las Vegas, NV 89118-3859		Preparation:	N/A
		Method:	SM 4500-NO3 E
		Units:	mg/L
Project: N033213			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-282-703**	**N/A**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	ND	0.10	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Asset Laboratories		Date Received:	12/05/18
3151 West Post Road		Work Order:	18-12-0352
Las Vegas, NV 89118-3859		Preparation:	N/A
		Method:	SM 4500-NO3 E
Project: N033213			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
N33213-008D / OW-02M-Q418	**Sample**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3S1**
N33213-008D / OW-02M-Q418	**Matrix Spike**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3S1**
N33213-008D / OW-02M-Q418	**Matrix Spike Duplicate**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3S1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate-Nitrite (as N)	2.589	0.5000	7.854	4X	7.927	4X	70-130	4X	0-25	Q

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033213

Date Received: 12/05/18
Work Order: 18-12-0352
Preparation: N/A
Method: SM 4500-NO3 E
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-282-703	**LCS**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**
099-14-282-703	**LCSD**	**Aqueous**	**UV 7**	**12/06/18**	**12/06/18 12:29**	**I1206NO3L1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate-Nitrite (as N)	0.5000	0.5275	106	0.5283	106	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 18-12-0352 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
SM 4500-NO3 E	N/A	1139	UV 7	1

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Glossary of Terms and Qualifiers

Work Order: 18-12-0352 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

18-12-0352

Subcontractor:
Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841

TEL: +1 714 895 5494
FAX:
Acct #:

Field Sampler: Jason Mahn

04-Dec-18

	Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM4500-NO3F		
1	N033213-001D / CW-02D-3V-Q418	Groundwater	12/3/2018 2:25:00 PM	4OZP	1		
2	N033213-002D / CW-02D-LF-Q418	Groundwater	12/3/2018 1:29:00 PM	4OZP	1		
3	N033213-003D / CW-02M-3V-Q418	Groundwater	12/3/2018 2:04:00 PM	4OZP	1		
4	N033213-004D / CW-02M-LF-Q418	Groundwater	12/3/2018 1:21:00 PM	4OZP	1		
5	N033213-006D / OW-01M-Q418	Groundwater	12/3/2018 3:28:00 PM	4OZP	1		
6	N033213-007C / OW-01S-Q418	Groundwater	12/3/2018 4:09:00 PM	4OZP	1		
7	N033213-008C / OW-02M-Q418	Groundwater	12/3/2018 3:31:00 PM	4OZP	1		
8	N033213-009D / CW-01D-3V-Q418	Groundwater	12/3/2018 2:24:00 PM	4OZP	1		
9	N033213-010D / CW-01D-LF-Q418	Groundwater	12/3/2018 1:35:00 PM	4OZP	1		
10	N033213-011D / CW-01M-3V-Q418	Groundwater	12/3/2018 2:18:00 PM	4OZP	1		
11	N033213-012D / CW-01M-LF-Q418	Groundwater	12/3/2018 1:41:00 PM	4OZP	1		
12	N033213-013D / MW-900-Q418	Groundwater	12/3/2018 2:23:00 PM	4OZP	1		
13	N033213-014D / CW-03D-3V-Q418	Groundwater	12/3/2018 3:50:00 PM	4OZP	1		
14	N033213-015D / CW-03D-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	4OZP	1		
15	N033213-016D / CW-03M-3V-Q418	Groundwater	12/3/2018 3:40:00 PM	4OZP	1		
16	N033213-017D / CW-03M-LF-Q418	Groundwater	12/3/2018 3:00:00 PM	4OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33213B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.

Please analyze for NO3- by SM4500. EDD Requireement Labspec7 edata.

GSO #: 542987634

		Date/Time			Date/Time
Relinquished by:	YKT	12/4/2018 17:00	**Received by:**		
Relinquished by:			**Received by:**	(GSO)	12/5/18 1025

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GSO | a GLS company GLS

800-322-5555
www.gso.com

Ship From
ADVANCED TECHNOLOGY LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
EUROFINS CALSCIENCE
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 542987634

PDS

ORC **C**
GARDEN GROVE

S92841A

94712813

Print Date: 12/4/2018 11:47 AM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

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WORK ORDER NUMBER: 18-12-852

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ASSET Labs.

DATE: 12/05/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: 0.0°C); Temperature (w/o CF): 3.6 °C (w/ CF): 3.6 °C; ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: LJS

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: LJS

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: HL/MW

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☑	☐	☐
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOA**na₂** ☐ 100PJ ☐ 100PJ**na₂** ☐ 125AGB ☐ 125AGBh ☐ 125AGB**p** ☐ 125PB ☐ 125PB**znna** (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGB**s** (pH__2) ☐ 250PB ☐ 250PB**n** (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s** (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB**na₂** ☐ 1AGB**s** (pH__2) ☐ 1AGB**s** (O&G) ☐ 1PB ☐ 1PB**na** (pH__12) ☑ 250PB (pH 2) ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: HL/MW

Reviewed by: LJS

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December 10, 2018

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N033238

RE: PG&E Topock - CMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 04, 2018 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Liburdi for

Quennie Manimtim
Laboratory Director

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SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Nitrate by SM4500-NO3F was subcontracted to Eurofins CalScience Inc.- Garden Grove, CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N033238-002E-MS2, N033238-002E-MSD2 and N033238-012E-MS2 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N033238-001E-MS1, N033238-001E-MSD1 and N033238-011E-MS1 since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Boron in QC samples N033238-001E-MS1, N033238-001E-MSD1 and N033238-011E-MS1 possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N033238-001E-MS, N033238-001E-MSD and N033238-011E-MS possibly due to matrix

interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (1.3 ug/L) for sample N033238-003 (CW-04M-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.2 and 2.1 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N033238-008 (OW-02D-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.1 and 0.93 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (87 ug/L) and hexavalent chromium (0.22 ug/L) for sample N033238-010 (MW-902-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 112 and 2.7 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (4.9 ug/L) and hexavalent chromium (0.21 ug/L) for sample N033238-012 (OW-05M-LF-Q418) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 5.4 and 2.2 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (2.1 ug/L) and hexavalent chromium (1.3 ug/L) for sample N033238-003 (CW-04M-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.1 ug/L) and hexavalent chromium (0 ug/L) for sample N033238-008 (OW-02D-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (87 ug/L) and hexavalent chromium (0.22 ug/L) for sample N033238-010 (MW-902-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (4.9 ug/L) and hexavalent chromium (0.21 ug/L) for

sample N033238-012 (OW-05M-LF-Q418) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary for samples N033238-003, -004, -005, -006, -007, -008 and -015 due to precipitation upon the addition of eluent.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033238
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033238-001A	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-001B	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-001C	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-001D	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-001E	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-001F	CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	12/4/2018	12/10/2018
N033238-002A	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-002B	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-002C	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-002D	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-002E	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-002F	CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	12/4/2018	12/10/2018
N033238-003A	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-003B	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-003C	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-003D	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-003E	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-003F	CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	12/4/2018	12/10/2018
N033238-004A	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-004B	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-004C	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-004D	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-004E	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-004F	MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	12/4/2018	12/10/2018
N033238-005A	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018
N033238-005B	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018
N033238-005C	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018
N033238-005D	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018
N033238-005E	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033238
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033238-005F	CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	12/4/2018	12/10/2018
N033238-006A	OW-05S-3V-Q418	Groundwater	12/4/2018 1:05:00 PM	12/4/2018	12/10/2018
N033238-006B	OW-05S-3V-Q418	Groundwater	12/4/2018 1:05:00 PM	12/4/2018	12/10/2018
N033238-006C	OW-05S-3V-Q418	Groundwater	12/4/2018 1:05:00 PM	12/4/2018	12/10/2018
N033238-006D	OW-05S-3V-Q418	Groundwater	12/4/2018 1:05:00 PM	12/4/2018	12/10/2018
N033238-007A	OW-05S-LF-Q418	Groundwater	12/4/2018 12:33:00 PM	12/4/2018	12/10/2018
N033238-007B	OW-05S-LF-Q418	Groundwater	12/4/2018 12:33:00 PM	12/4/2018	12/10/2018
N033238-007C	OW-05S-LF-Q418	Groundwater	12/4/2018 12:33:00 PM	12/4/2018	12/10/2018
N033238-007D	OW-05S-LF-Q418	Groundwater	12/4/2018 12:33:00 PM	12/4/2018	12/10/2018
N033238-008A	OW-02D-Q418	Groundwater	12/4/2018 9:04:00 AM	12/4/2018	12/10/2018
N033238-008B	OW-02D-Q418	Groundwater	12/4/2018 9:04:00 AM	12/4/2018	12/10/2018
N033238-008C	OW-02D-Q418	Groundwater	12/4/2018 9:04:00 AM	12/4/2018	12/10/2018
N033238-008D	OW-02D-Q418	Groundwater	12/4/2018 9:04:00 AM	12/4/2018	12/10/2018
N033238-009A	OW-05D-Q418	Groundwater	12/4/2018 1:49:00 PM	12/4/2018	12/10/2018
N033238-009B	OW-05D-Q418	Groundwater	12/4/2018 1:49:00 PM	12/4/2018	12/10/2018
N033238-009C	OW-05D-Q418	Groundwater	12/4/2018 1:49:00 PM	12/4/2018	12/10/2018
N033238-009D	OW-05D-Q418	Groundwater	12/4/2018 1:49:00 PM	12/4/2018	12/10/2018
N033238-010A	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-010B	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-010C	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-010D	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-010E	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-010F	MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	12/4/2018	12/10/2018
N033238-011A	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-011B	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-011C	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-011D	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-011E	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-011F	OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	12/4/2018	12/10/2018
N033238-012A	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - CMP, RC000753.801D
Lab Order: N033238
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N033238-012B	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018
N033238-012C	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018
N033238-012D	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018
N033238-012E	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018
N033238-012F	OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	12/4/2018	12/10/2018
N033238-013A	OW-02S-Q418	Groundwater	12/4/2018 9:55:00 AM	12/4/2018	12/10/2018
N033238-013B	OW-02S-Q418	Groundwater	12/4/2018 9:55:00 AM	12/4/2018	12/10/2018
N033238-013C	OW-02S-Q418	Groundwater	12/4/2018 9:55:00 AM	12/4/2018	12/10/2018
N033238-013D	OW-02S-Q418	Groundwater	12/4/2018 9:55:00 AM	12/4/2018	12/10/2018
N033238-014A	MW-707-Q418	Groundwater	12/4/2018 3:20:00 PM	12/4/2018	12/10/2018
N033238-015A	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018
N033238-015B	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018
N033238-015C	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018
N033238-015D	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018
N033238-015E	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018
N033238-015F	OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	12/4/2018	12/10/2018

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7300	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7200	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	5000	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	5200	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7300	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02S-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:55:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	3300	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SPECIFIC CONDUCTANCE							
			EPA 120.1				
RunID: **NV00922-WC_181205C**	QC Batch: **R130333**			PrepDate			Analyst: **LR**
Specific Conductance	7400	0.10	0.10		umhos/cm	1	12/5/2018 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 120.1_WPGE

Sample ID	N033236-001ADUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	130333
Client ID:	ZZZZZZ	Batch ID:	R130333	TestNo:	EPA 120.1			Analysis Date:	12/5/2018	SeqNo:	3219614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7510.000	0.10						7470	0.534	2	

Sample ID	N033238-007BDUP	SampType:	DUP	TestCode:	120.1_WPGE	Units:	umhos/cm	Prep Date:		RunNo:	130333
Client ID:	ZZZZZZ	Batch ID:	R130333	TestNo:	EPA 120.1			Analysis Date:	12/5/2018	SeqNo:	3219624

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	5190.000	0.10						5150	0.774	2	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4000	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3100	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	3200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205I**	QC Batch: **71624**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205J**	QC Batch: **71625**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205J**	QC Batch: **71625**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4200	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02S-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:55:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205J**	QC Batch: **71625**			PrepDate	**12/5/2018**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	1900	25	25		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_181205J**	QC Batch: **71625**				PrepDate	**12/5/2018**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	4100	50	50		mg/L	1	12/5/2018 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID **LCS-71624**	SampType: **LCS**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **12/5/2018**	RunNo: **130374**
Client ID: **LCSW**	Batch ID: **71624**	TestNo: **SM2540C**		Analysis Date: **12/5/2018**	SeqNo: **3221577**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	969.000	10	1000	0	96.9	80	120				

Sample ID **MB-71624**	SampType: **MBLK**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **12/5/2018**	RunNo: **130374**
Client ID: **PBW**	Batch ID: **71624**	TestNo: **SM2540C**		Analysis Date: **12/5/2018**	SeqNo: **3221578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID **N033238-001BDUP**	SampType: **DUP**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **12/5/2018**	RunNo: **130374**
Client ID: **ZZZZZZ**	Batch ID: **71624**	TestNo: **SM2540C**		Analysis Date: **12/5/2018**	SeqNo: **3221580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4160.000	50						4190	0.719	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	LCS-71625	SampType:	LCS	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	130375
Client ID:	LCSW	Batch ID:	71625	TestNo:	SM2540C			Analysis Date:	12/5/2018	SeqNo:	3221590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	971.000	10	1000	0	97.1	80	120				

Sample ID	MB-71625	SampType:	MBLK	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	130375
Client ID:	PBW	Batch ID:	71625	TestNo:	SM2540C			Analysis Date:	12/5/2018	SeqNo:	3221591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID	N033239-001CDUP	SampType:	DUP	TestCode:	160.1_2540C	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	130375
Client ID:	ZZZZZZ	Batch ID:	71625	TestNo:	SM2540C			Analysis Date:	12/5/2018	SeqNo:	3221601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	13100.000	200						12540	4.37	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-001

Client Sample ID: CW-04D-3V-Q418
Collection Date: 12/4/2018 9:25:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181206B** QC Batch: **71612** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/6/2018 11:31 AM
Boron	1200	74	100		µg/L	1	12/6/2018 11:31 AM
Calcium	150000	85	500		µg/L	1	12/6/2018 11:31 AM
Iron	ND	18	20		µg/L	1	12/6/2018 11:31 AM
Magnesium	9100	48	100		µg/L	1	12/6/2018 11:31 AM
Potassium	14000	85	500		µg/L	1	12/6/2018 05:47 AM
Sodium	1600000	9600	50000		µg/L	100	12/6/2018 05:53 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-002

Client Sample ID: CW-04D-LF-Q418
Collection Date: 12/4/2018 8:31:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206B**	QC Batch: **71612**				PrepDate	**12/5/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/6/2018 11:40 AM
Boron	1100	74	100		µg/L	1	12/6/2018 11:40 AM
Calcium	140000	85	500		µg/L	1	12/6/2018 11:40 AM
Iron	28	18	20		µg/L	1	12/6/2018 11:40 AM
Magnesium	8400	48	100		µg/L	1	12/6/2018 11:40 AM
Potassium	13000	85	500		µg/L	1	12/6/2018 05:56 AM
Sodium	1400000	9600	50000		µg/L	100	12/6/2018 06:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-003

Client Sample ID: CW-04M-LF-Q418
Collection Date: 12/4/2018 8:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206B**	QC Batch: **71612**				PrepDate	**12/5/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/6/2018 12:09 PM
Boron	1100	74	100		µg/L	1	12/6/2018 12:09 PM
Calcium	210000	85	500		µg/L	1	12/6/2018 12:09 PM
Iron	ND	18	20		µg/L	1	12/6/2018 12:09 PM
Magnesium	16000	48	100		µg/L	1	12/6/2018 12:09 PM
Potassium	15000	85	500		µg/L	1	12/6/2018 06:45 AM
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 06:51 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-004

Client Sample ID: MW-901-Q418
Collection Date: 12/4/2018 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206B**	QC Batch: **71612**				PrepDate	**12/5/2018**	Analyst: **CEI**
Aluminum	ND	40	50		µg/L	1	12/6/2018 12:18 PM
Boron	1000	74	100		µg/L	1	12/6/2018 12:18 PM
Calcium	200000	85	500		µg/L	1	12/6/2018 12:18 PM
Iron	ND	18	20		µg/L	1	12/6/2018 12:18 PM
Magnesium	15000	48	100		µg/L	1	12/6/2018 12:18 PM
Potassium	14000	85	500		µg/L	1	12/6/2018 06:54 AM
Sodium	1400000	9600	50000		µg/L	100	12/6/2018 06:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-005

Client Sample ID: CW-04M-3V-Q418
Collection Date: 12/4/2018 9:20:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181206B** QC Batch: **71612** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/6/2018 12:26 PM
Boron	980	74	100		µg/L	1	12/6/2018 12:26 PM
Calcium	190000	85	500		µg/L	1	12/6/2018 12:26 PM
Iron	ND	18	20		µg/L	1	12/6/2018 12:26 PM
Magnesium	15000	48	100		µg/L	1	12/6/2018 12:26 PM
Potassium	14000	85	500		µg/L	1	12/6/2018 07:10 AM
Sodium	1400000	9600	50000		µg/L	100	12/6/2018 07:15 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 200.7							
RunID: **NV00922-ICP2_181206A**	QC Batch: **71612**				PrepDate	**12/5/2018**	Analyst: **CEI**
Sodium	620000	9600	50000		µg/L	100	12/6/2018 07:18 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206A**	QC Batch: **71612**			PrepDate	**12/5/2018**		Analyst: **CEI**
Sodium	630000	9600	50000		µg/L	100	12/6/2018 07:22 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206A**	QC Batch: **71612**			PrepDate	**12/5/2018**		Analyst: **CEI**
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 07:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206A**	QC Batch: **71612**			PrepDate	**12/5/2018**		Analyst: **CEI**
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 07:28 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-010

Client Sample ID: MW-902-Q418
Collection Date: 12/4/2018 10:52:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206B**	QC Batch: **71612**				PrepDate	**12/5/2018**	Analyst: **CEI**
Aluminum	390	40	50		µg/L	1	12/6/2018 12:34 PM
Boron	1000	74	100		µg/L	1	12/6/2018 12:34 PM
Calcium	150000	85	500		µg/L	1	12/6/2018 12:34 PM
Iron	1200	18	20		µg/L	1	12/6/2018 12:34 PM
Magnesium	25000	48	100		µg/L	1	12/6/2018 12:34 PM
Potassium	16000	85	500		µg/L	1	12/6/2018 07:32 AM
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 07:37 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-011

Client Sample ID: OW-05M-3V-Q418
Collection Date: 12/4/2018 11:33:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181206B** QC Batch: **71612** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/6/2018 12:47 PM
Boron	1100	74	100		µg/L	1	12/6/2018 12:47 PM
Calcium	160000	85	500		µg/L	1	12/6/2018 12:47 PM
Iron	ND	18	20		µg/L	1	12/6/2018 12:47 PM
Magnesium	26000	48	100		µg/L	1	12/6/2018 12:47 PM
Potassium	17000	85	500		µg/L	1	12/6/2018 07:40 AM
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 07:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-012

Client Sample ID: OW-05M-LF-Q418
Collection Date: 12/4/2018 10:47:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181206B** QC Batch: **71612** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/6/2018 01:04 PM
Boron	1100	74	100		µg/L	1	12/6/2018 01:04 PM
Calcium	150000	85	500		µg/L	1	12/6/2018 01:04 PM
Iron	49	18	20		µg/L	1	12/6/2018 01:04 PM
Magnesium	26000	48	100		µg/L	1	12/6/2018 01:04 PM
Potassium	16000	430	2500		µg/L	5	12/6/2018 08:59 AM
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 08:08 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02S-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:55:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
			EPA 200.7				
RunID: **NV00922-ICP2_181206A**	QC Batch: **71612**			PrepDate	**12/5/2018**		Analyst: **CEI**
Sodium	590000	9600	50000		µg/L	100	12/6/2018 08:20 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-015

Client Sample ID: OW-01D-Q418
Collection Date: 12/4/2018 8:41:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICP

EPA 200.7

RunID: **NV00922-ICP2_181206B** QC Batch: **71612** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Aluminum	ND	40	50		µg/L	1	12/6/2018 01:27 PM
Boron	1100	74	100		µg/L	1	12/6/2018 01:27 PM
Calcium	160000	85	500		µg/L	1	12/6/2018 01:27 PM
Iron	ND	18	20		µg/L	1	12/6/2018 01:27 PM
Magnesium	24000	48	100		µg/L	1	12/6/2018 01:27 PM
Potassium	16000	85	500		µg/L	1	12/6/2018 08:24 AM
Sodium	1500000	9600	50000		µg/L	100	12/6/2018 08:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	MB-71612	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	PBW	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3220979

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	500									
Sodium	ND	500									

Sample ID	LCS2-71612	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	LCSW	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3220980

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	18695.466	500	20000	0	93.5	85	115				
Sodium	18960.070	500	20000	0	94.8	85	115				

Sample ID	N033238-002E-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3220995

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1536993.304	50000	20000	1449000	438	75	125				S

Sample ID	N033238-002E-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3220996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1527557.098	50000	20000	1449000	391	75	125	1537000	0.616	20	S

Sample ID	N033238-012E-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221020

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	1519223.905	50000	20000	1462000	284	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N033238-002E-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221026

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	32191.463	500	20000	12700	97.5	75	125				

Sample ID	N033238-002E-MSD	SampType:	MSD	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221029

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	33165.991	500	20000	12700	102	75	125	32190	2.98	20	

Sample ID	N033238-012E-MS2	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130357
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	39134.799	2500	20000	16110	115	75	125				

Sample ID	MB-71612	SampType:	MBLK	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	PBW	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221380

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	50									
Boron	ND	100									
Calcium	ND	500									
Iron	ND	20									
Magnesium	ND	100									

Sample ID	LCS1-71612	SampType:	LCS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	LCSW	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5136.238	50	5000	0	103	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID **LCS1-71612** SampType: **LCS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130366**
Client ID: **LCSW** Batch ID: **71612** TestNo: **EPA 200.7** Analysis Date: **12/6/2018** SeqNo: **3221381**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	963.377	100	1000	0	96.3	85	115				
Calcium	5035.056	500	5000	0	101	85	115				
Iron	109.655	20	100.0	0	110	85	115				
Magnesium	5244.189	100	5000	0	105	85	115				

Sample ID **N033238-001E-MS1** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130366**
Client ID: **ZZZZZZ** Batch ID: **71612** TestNo: **EPA 200.7** Analysis Date: **12/6/2018** SeqNo: **3221398**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5307.013	50	5000	0	106	75	125				
Boron	2457.729	100	1000	1164	129	75	125				S
Calcium	145569.541	500	5000	152200	-132	75	125				S
Iron	104.063	20	100.0	0	104	75	125				
Magnesium	14216.441	100	5000	9094	102	75	125				

Sample ID **N033238-001E-MSD** SampType: **MSD** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130366**
Client ID: **ZZZZZZ** Batch ID: **71612** TestNo: **EPA 200.7** Analysis Date: **12/6/2018** SeqNo: **3221399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5300.423	50	5000	0	106	75	125	5307	0.124	20	
Boron	2466.136	100	1000	1164	130	75	125	2458	0.341	20	S
Calcium	145490.835	500	5000	152200	-134	75	125	145600	0.0541	20	S
Iron	105.452	20	100.0	0	105	75	125	104.1	1.33	20	
Magnesium	14200.066	100	5000	9094	102	75	125	14220	0.115	20	

Sample ID **N033238-011E-MS1** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130366**
Client ID: **ZZZZZZ** Batch ID: **71612** TestNo: **EPA 200.7** Analysis Date: **12/6/2018** SeqNo: **3221400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.7_WDPGEPPB

Sample ID	N033238-011E-MS1	SampType:	MS	TestCode:	200.7_WDPG	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	ZZZZZZ	Batch ID:	71612	TestNo:	EPA 200.7			Analysis Date:	12/6/2018	SeqNo:	3221400

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5249.959	50	5000	0	105	75	125				
Boron	2431.098	100	1000	1087	134	75	125				S
Calcium	158318.348	500	5000	155800	51.1	75	125				S
Iron	109.581	20	100.0	0	110	75	125				
Magnesium	30638.658	100	5000	25820	96.3	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-001

Client Sample ID: CW-04D-3V-Q418
Collection Date: 12/4/2018 9:25:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 05:12 PM
Arsenic	3.0	0.081	0.10		µg/L	1	12/5/2018 05:12 PM
Barium	19	0.15	1.0		µg/L	1	12/5/2018 05:12 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 05:12 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 05:12 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 05:12 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 05:12 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 05:12 PM
Manganese	1.7	0.26	0.50		µg/L	1	12/5/2018 05:12 PM
Molybdenum	20	0.21	0.50		µg/L	1	12/6/2018 10:58 PM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 05:12 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/5/2018 05:12 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 05:12 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 05:12 PM
Vanadium	2.7	0.28	1.0		µg/L	1	12/5/2018 05:12 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 05:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-002

Client Sample ID: CW-04D-LF-Q418
Collection Date: 12/4/2018 8:31:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 05:41 PM
Arsenic	3.0	0.081	0.10		µg/L	1	12/5/2018 05:41 PM
Barium	18	0.15	1.0		µg/L	1	12/5/2018 05:41 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 05:41 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 05:41 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 05:41 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 05:41 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 05:41 PM
Manganese	2.4	0.26	0.50		µg/L	1	12/5/2018 05:41 PM
Molybdenum	20	0.21	0.50		µg/L	1	12/6/2018 11:26 PM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 05:41 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/5/2018 05:41 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 05:41 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 05:41 PM
Vanadium	2.6	0.28	1.0		µg/L	1	12/5/2018 05:41 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 05:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-003

Client Sample ID: CW-04M-LF-Q418
Collection Date: 12/4/2018 8:30:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 05:46 PM
Arsenic	2.0	0.081	0.10		µg/L	1	12/5/2018 05:46 PM
Barium	99	0.15	1.0		µg/L	1	12/5/2018 05:46 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 05:46 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 05:46 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 05:46 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 05:46 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 05:46 PM
Manganese	0.89	0.26	0.50		µg/L	1	12/5/2018 05:46 PM
Molybdenum	11	0.21	0.50		µg/L	1	12/6/2018 11:32 PM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 05:46 PM
Selenium	3.0	0.36	0.50		µg/L	1	12/5/2018 05:46 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 05:46 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 05:46 PM
Vanadium	2.7	0.28	1.0		µg/L	1	12/5/2018 05:46 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 05:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-004

Client Sample ID: MW-901-Q418
Collection Date: 12/4/2018 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B**	QC Batch: **71615**				PrepDate	**12/5/2018**	Analyst: **CEI**
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 05:52 PM
Arsenic	2.0	0.081	0.10		µg/L	1	12/5/2018 05:52 PM
Barium	100	0.15	1.0		µg/L	1	12/5/2018 05:52 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 05:52 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 05:52 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 05:52 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 05:52 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 05:52 PM
Manganese	0.86	0.26	0.50		µg/L	1	12/5/2018 05:52 PM
Molybdenum	10	0.21	0.50		µg/L	1	12/6/2018 11:38 PM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 05:52 PM
Selenium	3.7	0.36	0.50		µg/L	1	12/5/2018 05:52 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 05:52 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 05:52 PM
Vanadium	2.7	0.28	1.0		µg/L	1	12/5/2018 05:52 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 05:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-005

Client Sample ID: CW-04M-3V-Q418
Collection Date: 12/4/2018 9:20:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 06:09 PM
Arsenic	2.1	0.081	0.10		µg/L	1	12/5/2018 06:09 PM
Barium	110	0.15	1.0		µg/L	1	12/5/2018 06:09 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 06:09 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 06:09 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 06:09 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 06:09 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 06:09 PM
Manganese	0.84	0.26	0.50		µg/L	1	12/5/2018 06:09 PM
Molybdenum	11	0.21	0.50		µg/L	1	12/6/2018 11:54 PM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 06:09 PM
Selenium	3.9	0.36	0.50		µg/L	1	12/5/2018 06:09 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 06:09 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 06:09 PM
Vanadium	3.0	0.28	1.0		µg/L	1	12/5/2018 06:09 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 06:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
EPA 200.8							
RunID: **NV00922-ICP7_181206A** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**							
Molybdenum	9.8	0.21	0.50		µg/L	1	12/7/2018 12:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181206A**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Molybdenum	9.3	0.21	0.50		µg/L	1	12/7/2018 12:06 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181206A**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Molybdenum	21	0.21	0.50		µg/L	1	12/7/2018 12:11 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181206A**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Molybdenum	22	0.21	0.50		µg/L	1	12/7/2018 12:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-010

Client Sample ID: MW-902-Q418
Collection Date: 12/4/2018 10:52:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	0.84	0.16	0.50		µg/L	1	12/5/2018 06:37 PM
Arsenic	1.5	0.081	0.10		µg/L	1	12/5/2018 06:37 PM
Barium	42	0.15	1.0		µg/L	1	12/5/2018 06:37 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 06:37 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 06:37 PM
Cobalt	1.1	0.042	0.50		µg/L	1	12/5/2018 06:37 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 06:37 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 06:37 PM
Manganese	83	0.26	0.50		µg/L	1	12/5/2018 06:37 PM
Molybdenum	22	0.21	0.50		µg/L	1	12/7/2018 12:22 AM
Nickel	6.7	0.26	1.0		µg/L	1	12/5/2018 06:37 PM
Selenium	3.6	0.36	0.50		µg/L	1	12/5/2018 06:37 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 06:37 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 06:37 PM
Vanadium	3.4	0.28	1.0		µg/L	1	12/5/2018 06:37 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 06:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-011

Client Sample ID: OW-05M-3V-Q418
Collection Date: 12/4/2018 11:33:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 06:43 PM
Arsenic	0.74	0.081	0.10		µg/L	1	12/5/2018 06:43 PM
Barium	40	0.15	1.0		µg/L	1	12/5/2018 06:43 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 06:43 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 06:43 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 06:43 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 06:43 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 06:43 PM
Manganese	ND	0.26	0.50		µg/L	1	12/5/2018 06:43 PM
Molybdenum	22	0.21	0.50		µg/L	1	12/7/2018 12:28 AM
Nickel	ND	0.26	1.0		µg/L	1	12/5/2018 06:43 PM
Selenium	3.9	0.36	0.50		µg/L	1	12/5/2018 06:43 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 06:43 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 06:43 PM
Vanadium	ND	0.28	1.0		µg/L	1	12/5/2018 06:43 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 06:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-012

Client Sample ID: OW-05M-LF-Q418
Collection Date: 12/4/2018 10:47:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	0.84	0.16	0.50		µg/L	1	12/5/2018 06:54 PM
Arsenic	0.82	0.081	0.10		µg/L	1	12/5/2018 06:54 PM
Barium	38	0.15	1.0		µg/L	1	12/5/2018 06:54 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 06:54 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 06:54 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 06:54 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 06:54 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 06:54 PM
Manganese	6.3	0.26	0.50		µg/L	1	12/5/2018 06:54 PM
Molybdenum	22	0.21	0.50		µg/L	1	12/7/2018 12:39 AM
Nickel	1.5	0.26	1.0		µg/L	1	12/5/2018 06:54 PM
Selenium	4.0	0.36	0.50		µg/L	1	12/5/2018 06:54 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 06:54 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 06:54 PM
Vanadium	ND	0.28	1.0		µg/L	1	12/5/2018 06:54 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 06:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02S-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:55:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICPMS							
			EPA 200.8				
RunID: **NV00922-ICP7_181206A**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Molybdenum	27	0.21	0.50		µg/L	1	12/7/2018 12:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-015

Client Sample ID: OW-01D-Q418
Collection Date: 12/4/2018 8:41:00 AM
Matrix: GROUNDWATER

DISSOLVED METALS BY ICPMS

EPA 200.8

RunID: **NV00922-ICP7_181205B** QC Batch: **71615** PrepDate **12/5/2018** Analyst: **CEI**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
Antimony	ND	0.16	0.50		µg/L	1	12/5/2018 07:17 PM
Arsenic	1.2	0.081	0.10		µg/L	1	12/5/2018 07:17 PM
Barium	30	0.15	1.0		µg/L	1	12/5/2018 07:17 PM
Beryllium	ND	0.042	0.50		µg/L	1	12/5/2018 07:17 PM
Cadmium	ND	0.053	0.50		µg/L	1	12/5/2018 07:17 PM
Cobalt	ND	0.042	0.50		µg/L	1	12/5/2018 07:17 PM
Copper	ND	0.55	1.0		µg/L	1	12/5/2018 07:17 PM
Lead	ND	0.13	1.0		µg/L	1	12/5/2018 07:17 PM
Manganese	1.0	0.26	0.50		µg/L	1	12/5/2018 07:17 PM
Molybdenum	21	0.21	0.50		µg/L	1	12/7/2018 01:02 AM
Nickel	1.4	0.26	1.0		µg/L	1	12/5/2018 07:17 PM
Selenium	3.8	0.36	0.50		µg/L	1	12/5/2018 07:17 PM
Silver	ND	0.23	0.50		µg/L	1	12/5/2018 07:17 PM
Thallium	ND	0.19	0.50		µg/L	1	12/5/2018 07:17 PM
Vanadium	2.2	0.28	1.0		µg/L	1	12/5/2018 07:17 PM
Zinc	ND	2.3	10		µg/L	1	12/5/2018 07:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **MB-71615** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130355**
Client ID: **PBW** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/5/2018** SeqNo: **3220929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Barium	ND	1.0									
Beryllium	ND	0.50									
Cadmium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.0									
Lead	ND	1.0									
Manganese	ND	0.50									
Nickel	ND	1.0									
Selenium	ND	0.50									
Silver	ND	0.50									
Thallium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **LCS-71615** SampType: **LCS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130355**
Client ID: **LCSW** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/5/2018** SeqNo: **3220930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.526	0.50	10.00	0	95.3	85	115				
Arsenic	9.781	0.10	10.00	0	97.8	85	115				
Barium	10.084	1.0	10.00	0	101	85	115				
Beryllium	9.801	0.50	10.00	0	98.0	85	115				
Cadmium	9.978	0.50	10.00	0	99.8	85	115				
Cobalt	9.391	0.50	10.00	0	93.9	85	115				
Copper	10.071	1.0	10.00	0	101	85	115				
Lead	9.452	1.0	10.00	0	94.5	85	115				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	LCS-71615	SampType:	LCS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	LCSW	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220930

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	101.385	0.50	100.0	0	101	85	115				
Nickel	9.904	1.0	10.00	0	99.0	85	115				
Selenium	9.374	0.50	10.00	0	93.7	85	115				
Silver	10.015	0.50	10.00	0	100	85	115				
Thallium	9.198	0.50	10.00	0	92.0	85	115				
Vanadium	9.648	1.0	10.00	0	96.5	85	115				
Zinc	10.105	10	10.00	0	101	85	115				

Sample ID	N033238-001E-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	ZZZZZZ	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220934

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.882	0.50	10.00	0	98.8	75	125				
Arsenic	13.270	0.10	10.00	2.983	103	75	125				
Barium	28.347	1.0	10.00	18.77	95.8	75	125				
Beryllium	12.734	0.50	10.00	0	127	75	125				S
Cadmium	9.705	0.50	10.00	0	97.1	75	125				
Cobalt	8.627	0.50	10.00	0	86.3	75	125				
Copper	2.834	1.0	10.00	0	28.3	75	125				S
Lead	9.605	1.0	10.00	0	96.1	75	125				
Manganese	98.857	0.50	100.0	1.652	97.2	75	125				
Nickel	9.055	1.0	10.00	0	90.5	75	125				
Selenium	14.190	0.50	10.00	3.988	102	75	125				
Silver	9.865	0.50	10.00	0	98.6	75	125				
Thallium	9.001	0.50	10.00	0	90.0	75	125				
Vanadium	12.910	1.0	10.00	2.677	102	75	125				
Zinc	3.445	10	10.00	0	34.4	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **N033238-001E-MSD** SampType: **MSD** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130355**
Client ID: **ZZZZZZ** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/5/2018** SeqNo: **3220935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.903	0.50	10.00	0	99.0	75	125	9.882	0.207	20	
Arsenic	13.289	0.10	10.00	2.983	103	75	125	13.27	0.140	20	
Barium	28.369	1.0	10.00	18.77	96.0	75	125	28.35	0.0766	20	
Beryllium	12.769	0.50	10.00	0	128	75	125	12.73	0.268	20	S
Cadmium	9.711	0.50	10.00	0	97.1	75	125	9.705	0.0638	20	
Cobalt	8.725	0.50	10.00	0	87.2	75	125	8.627	1.12	20	
Copper	3.000	1.0	10.00	0	30.0	75	125	2.834	5.67	20	S
Lead	9.673	1.0	10.00	0	96.7	75	125	9.605	0.705	20	
Manganese	98.756	0.50	100.0	1.652	97.1	75	125	98.86	0.103	20	
Nickel	9.237	1.0	10.00	0	92.4	75	125	9.055	1.99	20	
Selenium	13.601	0.50	10.00	3.988	96.1	75	125	14.19	4.24	20	
Silver	9.849	0.50	10.00	0	98.5	75	125	9.865	0.161	20	
Thallium	9.092	0.50	10.00	0	90.9	75	125	9.001	1.01	20	
Vanadium	12.840	1.0	10.00	2.677	102	75	125	12.91	0.546	20	
Zinc	3.249	10	10.00	0	32.5	75	125	3.445	0	20	S

Sample ID **N033238-011E-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130355**
Client ID: **ZZZZZZ** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/5/2018** SeqNo: **3220948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.988	0.50	10.00	0	99.9	75	125				
Arsenic	11.334	0.10	10.00	0.7442	106	75	125				
Barium	48.799	1.0	10.00	39.84	89.6	75	125				
Beryllium	12.985	0.50	10.00	0.04580	129	75	125				S
Cadmium	9.624	0.50	10.00	0	96.2	75	125				
Cobalt	8.934	0.50	10.00	0	89.3	75	125				
Copper	3.540	1.0	10.00	0	35.4	75	125				S
Lead	9.599	1.0	10.00	0	96.0	75	125				
Manganese	98.551	0.50	100.0	0	98.6	75	125				
Nickel	9.919	1.0	10.00	0.3031	96.2	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID **N033238-011E-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130355**
Client ID: **ZZZZZZ** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/5/2018** SeqNo: **3220948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	13.714	0.50	10.00	3.945	97.7	75	125				
Silver	9.695	0.50	10.00	0	96.9	75	125				
Thallium	9.196	0.50	10.00	0	92.0	75	125				
Vanadium	11.327	1.0	10.00	0.9780	103	75	125				
Zinc	3.442	10	10.00	0	34.4	75	125				S

Sample ID **MB-71615** SampType: **MBLK** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130388**
Client ID: **PBW** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/6/2018** SeqNo: **3222143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									

Sample ID **LCS-71615** SampType: **LCS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130388**
Client ID: **LCSW** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/6/2018** SeqNo: **3222144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	9.827	0.50	10.00	0	98.3	85	115				

Sample ID **N033238-001E-MS** SampType: **MS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130388**
Client ID: **ZZZZZZ** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/6/2018** SeqNo: **3222148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	32.510	0.50	10.00	20.29	122	75	125				

Sample ID **N033238-001E-MSD** SampType: **MSD** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: **12/5/2018** RunNo: **130388**
Client ID: **ZZZZZZ** Batch ID: **71615** TestNo: **EPA 200.8** Analysis Date: **12/6/2018** SeqNo: **3222149**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	32.693	0.50	10.00	20.29	124	75	125	32.51	0.562	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_WDISS

Sample ID	N033238-011E-MS	SampType:	MS	TestCode:	200.8_WDISS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130388
Client ID:	ZZZZZZ	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/7/2018	SeqNo:	3222162

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	33.015	0.50	10.00	21.62	114	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-001

Client Sample ID: CW-04D-3V-Q418
Collection Date: 12/4/2018 9:25:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A**	QC Batch: **R130313**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.31	0.033	0.20		µg/L	1	12/5/2018 10:52 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/5/2018 05:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-002

Client Sample ID: CW-04D-LF-Q418
Collection Date: 12/4/2018 8:31:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.28	0.033	0.20		µg/L	1	12/5/2018 11:01 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/5/2018 05:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-003

Client Sample ID: CW-04M-LF-Q418
Collection Date: 12/4/2018 8:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.3	0.033	0.20		µg/L	1	12/5/2018 11:11 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	2.1	0.13	1.0		µg/L	1	12/5/2018 05:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-004

Client Sample ID: MW-901-Q418
Collection Date: 12/4/2018 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.3	0.033	0.20		µg/L	1	12/5/2018 11:20 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	1.9	0.13	1.0		µg/L	1	12/5/2018 05:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	1.3	0.033	0.20		µg/L	1	12/5/2018 11:30 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	2.0	0.13	1.0		µg/L	1	12/5/2018 06:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-006

Client Sample ID: OW-05S-3V-Q418
Collection Date: 12/4/2018 1:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	12	0.066	0.40		µg/L	2	12/5/2018 02:00 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	12	0.13	1.0		µg/L	1	12/5/2018 06:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	12	0.033	0.20		µg/L	1	12/5/2018 02:09 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	12	0.13	1.0		µg/L	1	12/5/2018 06:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-008

Client Sample ID: OW-02D-Q418
Collection Date: 12/4/2018 9:04:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/5/2018 02:19 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	1.1	0.13	1.0		µg/L	1	12/5/2018 06:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-009

Client Sample ID: OW-05D-Q418
Collection Date: 12/4/2018 1:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/5/2018 02:28 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/5/2018 06:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-010

Client Sample ID: MW-902-Q418
Collection Date: 12/4/2018 10:52:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.22	0.033	0.20		µg/L	1	12/5/2018 02:38 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	87	0.13	1.0		µg/L	1	12/5/2018 06:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-011

Client Sample ID: OW-05M-3V-Q418
Collection Date: 12/4/2018 11:33:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A** QC Batch: **R130313**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.22	0.033	0.20		µg/L	1	12/5/2018 04:03 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/5/2018 06:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A**	QC Batch: **R130313**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.21	0.033	0.20		µg/L	1	12/5/2018 04:12 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	4.9	0.13	1.0		µg/L	1	12/5/2018 06:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-013

Client Sample ID: OW-02S-Q418
Collection Date: 12/4/2018 9:55:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181206A** QC Batch: **R130362**				PrepDate			Analyst: **RAB**
Hexavalent Chromium	15	0.17	1.0		µg/L	5	12/6/2018 08:58 AM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B** QC Batch: **71615**				PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	17	0.13	1.0		µg/L	1	12/5/2018 07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-707-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 3:20:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A**	QC Batch: **R130313**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	ND	0.033	0.20		µg/L	1	12/5/2018 04:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_181205A**	QC Batch: **R130313**			PrepDate			Analyst: **RAB**
Hexavalent Chromium	0.54	0.033	0.20		µg/L	1	12/5/2018 04:41 PM
DISSOLVED METALS BY ICP-MS							
			EPA 200.8				
RunID: **NV00922-ICP7_181205B**	QC Batch: **71615**			PrepDate	**12/5/2018**		Analyst: **CEI**
Chromium	ND	0.13	1.0		µg/L	1	12/5/2018 07:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_CrPGE

Sample ID	MB-71615	SampType:	MBLK	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	PBW	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	LCS-71615	SampType:	LCS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	LCSW	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.916	1.0	10.00	0	99.2	85	115				

Sample ID	N033238-001E-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	ZZZZZZ	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220891

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.131	1.0	10.00	0.4974	96.3	75	125				

Sample ID	N033238-001E-MSD	SampType:	MSD	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	ZZZZZZ	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220892

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.154	1.0	10.00	0.4974	96.6	75	125	10.13	0.220	20	

Sample ID	N033238-011E-MS	SampType:	MS	TestCode:	200.8DIS_Cr	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130355
Client ID:	ZZZZZZ	Batch ID:	71615	TestNo:	EPA 200.8			Analysis Date:	12/5/2018	SeqNo:	3220905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.187	1.0	10.00	0.4594	97.3	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R130313	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	PBW	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID	LCS-R130313	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	LCSW	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.994	0.20	5.000	0	99.9	90	110				

Sample ID	N033230-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID	N033230-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218906

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.905	0.20	1.000	0	90.5	90	110				

Sample ID	N033231-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218907

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.081	0.20	1.000	0.05910	102	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033230-001AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218908

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.943	0.20	1.000	0	94.3	90	110	0.9682	2.62	20	

Sample ID	N033238-001ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.302	0.20						0.3055	1.15	20	

Sample ID	N033238-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3218917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.358	0.20	1.000	0.3055	105	90	110				

Sample ID	N033238-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221036

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.367	0.20	1.000	0.2797	109	90	110				

Sample ID	N033238-003AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221037

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.341	0.20	1.000	1.294	105	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033238-004AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221040

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.339	0.20	1.000	1.349	99.0	90	110				

Sample ID	N033238-005AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221041

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.318	0.20	1.000	1.320	99.8	90	110				

Sample ID	N033238-007AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221047

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.794	0.20	5.000	11.85	98.9	90	110				

Sample ID	N033238-008AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221048

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.208	0.20	1.000	0.1746	103	90	110				

Sample ID	N033238-009AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221051

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.083	0.20	1.000	0.1203	96.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID **N033238-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **130313**
Client ID: **ZZZZZZ** Batch ID: **R130313** TestNo: **EPA 218.6** Analysis Date: **12/5/2018** SeqNo: **3221052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.243	0.20	1.000	0.2248	102	90	110				

Sample ID **N033238-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **130313**
Client ID: **ZZZZZZ** Batch ID: **R130313** TestNo: **EPA 218.6** Analysis Date: **12/5/2018** SeqNo: **3221053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	22.840	0.40	10.00	12.14	107	90	110				

Sample ID **N033238-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **130313**
Client ID: **ZZZZZZ** Batch ID: **R130313** TestNo: **EPA 218.6** Analysis Date: **12/5/2018** SeqNo: **3221058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.239	0.20	1.000	0.2185	102	90	110				

Sample ID **N033238-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **130313**
Client ID: **ZZZZZZ** Batch ID: **R130313** TestNo: **EPA 218.6** Analysis Date: **12/5/2018** SeqNo: **3221059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.252	0.20	1.000	0.2108	104	90	110				

Sample ID **N033238-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **130313**
Client ID: **ZZZZZZ** Batch ID: **R130313** TestNo: **EPA 218.6** Analysis Date: **12/5/2018** SeqNo: **3221062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.005	0.20	1.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033238-015AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130313
Client ID:	ZZZZZZ	Batch ID:	R130313	TestNo:	EPA 218.6			Analysis Date:	12/5/2018	SeqNo:	3221063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.569	0.20	1.000	0.5378	103	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R130362	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362	
Client ID:	PBW	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221260	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		ND	0.20									

Sample ID	LCS-R130362	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362	
Client ID:	LCSW	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221261	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		5.040	0.20	5.000	0	101	90	110				

Sample ID	N033238-013AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362	
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221263	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		40.618	1.0	25.00	15.22	102	90	110				

Sample ID	N033262-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362	
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221269	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		6022.600	100	2500	3540	99.3	90	110				

Sample ID	N033262-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362	
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221271	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		1121.570	20	500.0	617.3	101	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N033262-002AMSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221272

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1116.560	20	500.0	617.3	99.8	90	110	1122	0.448	20	

Sample ID	N033262-001ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221273

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3586.200	100						3540	1.29	20	

Sample ID	N033264-001AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221274

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.662	1.0	5.000	0	93.2	90	110				

Sample ID	N033264-002AMS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	130362
Client ID:	ZZZZZZ	Batch ID:	R130362	TestNo:	EPA 218.6			Analysis Date:	12/6/2018	SeqNo:	3221275

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.613	1.0	5.000	0	92.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	0.60	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	8.4	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	3.1	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	0.86	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	0.66	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	2.3	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	6.8	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	2.9	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	0.36	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	19	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	3.8	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	28	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02S-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:55:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-013		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	6.4	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TURBIDITY							
			SM 2130B				
RunID: **NV00922-WC_181205E**	QC Batch: **R130336**			PrepDate			Analyst: **LR**
Turbidity	11	0.10	0.10		NTU	1	12/5/2018 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2130_W

Sample ID	MB-R130336	SampType:	MBLK	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130336
Client ID:	PBW	Batch ID:	R130336	TestNo:	SM 2130B			Analysis Date:	12/5/2018	SeqNo:	3219677

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	ND	0.10									

Sample ID	N033238-001BDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130336
Client ID:	ZZZZZZ	Batch ID:	R130336	TestNo:	SM 2130B			Analysis Date:	12/5/2018	SeqNo:	3219690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	0.590	0.10						0.6000	1.68	30	

Sample ID	N033238-011BDUP	SampType:	DUP	TestCode:	2130_W	Units:	NTU	Prep Date:		RunNo:	130336
Client ID:	ZZZZZZ	Batch ID:	R130336	TestNo:	SM 2130B			Analysis Date:	12/5/2018	SeqNo:	3219701

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Turbidity	3.680	0.10						3.750	1.88	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	59	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	61	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	53	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	55	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	55	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181205A**	QC Batch: **R130327**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	74	1.2	5.0		mg/L	1	12/5/2018 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181206A**	QC Batch: **R130373**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	77	1.2	5.0		mg/L	1	12/6/2018 09:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181206A**	QC Batch: **R130373**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	76	1.2	5.0		mg/L	1	12/6/2018 09:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_181206A**	QC Batch: **R130373**			PrepDate			Analyst: **LR**
Alkalinity, Total (As CaCO3)	76	1.2	5.0		mg/L	1	12/6/2018 09:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID **LCS-R130327**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **LCSW**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	93.882	5.0	100.0	0	93.9	85	115				

Sample ID **MB-R130327**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **PBW**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID **N033213-001BMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221505**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	158.228	5.0	100.0	61.18	97.0	75	125				

Sample ID **N033213-001BMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	156.118	5.0	100.0	61.18	94.9	75	125	158.2	1.34	20	

Sample ID **N033213-017BDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **130327**
Client ID: **ZZZZZZ**	Batch ID: **R130327**	TestNo: **SM 2320 B**		Analysis Date: **12/5/2018**	SeqNo: **3221520**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	32.700	5.0						31.65	3.28	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID	LCS-R130373	SampType:	LCS	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	130373		
Client ID:	LCSW	Batch ID:	R130373	TestNo:	SM 2320 B			Analysis Date:	12/6/2018	SeqNo:	3221527		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Alkalinity, Total (As CaCO3)	97.222	5.0	100.0	0	97.2	85	115						

Sample ID	MB-R130373	SampType:	MBLK	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	130373		
Client ID:	PBW	Batch ID:	R130373	TestNo:	SM 2320 B			Analysis Date:	12/6/2018	SeqNo:	3221528		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Alkalinity, Total (As CaCO3)	ND	5.0											

Sample ID	N033239-002CMS	SampType:	MS	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	130373		
Client ID:	ZZZZZZ	Batch ID:	R130373	TestNo:	SM 2320 B			Analysis Date:	12/6/2018	SeqNo:	3221536		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Alkalinity, Total (As CaCO3)	199.786	5.0	100.0	106.8	92.9	75	125						

Sample ID	N033239-002CMSD	SampType:	MSD	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	130373		
Client ID:	ZZZZZZ	Batch ID:	R130373	TestNo:	SM 2320 B			Analysis Date:	12/6/2018	SeqNo:	3221537		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Alkalinity, Total (As CaCO3)	200.855	5.0	100.0	106.8	94.0	75	125	199.8	0.533	20			

Sample ID	N033239-008CDUP	SampType:	DUP	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	130373		
Client ID:	ZZZZZZ	Batch ID:	R130373	TestNo:	SM 2320 B			Analysis Date:	12/6/2018	SeqNo:	3221543		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Alkalinity, Total (As CaCO3)	34.188	5.0						33.12	3.17	30			

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610**				PrepDate	**12/5/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 01:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610**				PrepDate	**12/5/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 245.1				
RunID: **NV00922-AA1_181205B** QC Batch: **71610**				PrepDate	**12/5/2018**		Analyst: **MG**
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE							
EPA 245.1							
RunID: **NV00922-AA1_181205B** QC Batch: **71610** PrepDate **12/5/2018** Analyst: **MG**							
Mercury	ND	0.13	0.20		µg/L	1	12/5/2018 02:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 245.1_WD

Sample ID	MB-71610	SampType:	MBLK	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130316
Client ID:	PBW	Batch ID:	71610	TestNo:	EPA 245.1			Analysis Date:	12/5/2018	SeqNo:	3219120

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.20									

Sample ID	LCS-71610	SampType:	LCS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130316
Client ID:	LCSW	Batch ID:	71610	TestNo:	EPA 245.1			Analysis Date:	12/5/2018	SeqNo:	3219121

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.793	0.20	5.000	0	95.9	85	115				

Sample ID	N033238-002E-MS	SampType:	MS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130316
Client ID:	ZZZZZZ	Batch ID:	71610	TestNo:	EPA 245.1			Analysis Date:	12/5/2018	SeqNo:	3219122

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.870	0.20	5.000	0	97.4	75	125				

Sample ID	N033238-002E-MSD	SampType:	MSD	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130316
Client ID:	ZZZZZZ	Batch ID:	71610	TestNo:	EPA 245.1			Analysis Date:	12/5/2018	SeqNo:	3219123

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.606	0.20	5.000	0	92.1	75	125	4.870	5.57	20	

Sample ID	N033238-015E-MS	SampType:	MS	TestCode:	245.1_WD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	130316
Client ID:	ZZZZZZ	Batch ID:	71610	TestNo:	EPA 245.1			Analysis Date:	12/5/2018	SeqNo:	3219136

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.811	0.20	5.000	0	96.2	75	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 09:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.8	0.013	0.20		mg/L	2	12/5/2018 10:41 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/5/2018 10:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-002

Client Sample ID: CW-04D-LF-Q418
Collection Date: 12/4/2018 8:31:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 04:29 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.6	0.013	0.20		mg/L	2	12/5/2018 10:57 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	480	1.1	25		mg/L	50	12/6/2018 03:32 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2000	4.6	250		mg/L	500	12/5/2018 10:16 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	1.9	0.032	0.50		mg/L	5	12/5/2018 11:44 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/5/2018 10:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-004

Client Sample ID: MW-901-Q418
Collection Date: 12/4/2018 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2000	4.6	250		mg/L	500	12/5/2018 10:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.032	0.50		mg/L	5	12/5/2018 12:00 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/5/2018 11:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-005

Client Sample ID: CW-04M-3V-Q418
Collection Date: 12/4/2018 9:20:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2000	4.6	250		mg/L	500	12/5/2018 07:38 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.0	0.032	0.50		mg/L	5	12/5/2018 12:16 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/5/2018 08:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:05:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	1500	4.6	250		mg/L	500	12/5/2018 11:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	1.4	0.032	0.50		mg/L	5	12/5/2018 12:32 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	300	1.1	25		mg/L	50	12/5/2018 11:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05S-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 12:33:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-007		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	1600	4.6	250		mg/L	500	12/6/2018 12:23 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	1.5	0.032	0.50		mg/L	5	12/5/2018 12:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	320	1.1	25		mg/L	50	12/6/2018 12:38 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-02D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:04:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/6/2018 03:48 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	12/5/2018 01:03 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/5/2018 05:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 1:49:00 PM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-009		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/6/2018 12:54 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.3	0.013	0.20		mg/L	2	12/5/2018 10:25 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	500	1.1	25		mg/L	50	12/6/2018 01:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-010

Client Sample ID: MW-902-Q418
Collection Date: 12/4/2018 10:52:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/6/2018 01:26 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.013	0.20		mg/L	2	12/5/2018 01:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/6/2018 01:42 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/6/2018 01:57 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.013	0.20		mg/L	2	12/5/2018 01:35 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	500	1.1	25		mg/L	50	12/6/2018 02:13 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-012

Client Sample ID: OW-05M-LF-Q418
Collection Date: 12/4/2018 10:47:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2200	4.6	250		mg/L	500	12/6/2018 02:29 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.013	0.20		mg/L	2	12/5/2018 01:51 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/6/2018 02:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Lab Order: N033238
Project: PG&E Topock - CMP, RC000753.801D
Lab ID: N033238-013

Client Sample ID: OW-02S-Q418
Collection Date: 12/4/2018 9:55:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	910	1.8	100		mg/L	200	12/5/2018 09:13 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	3.1	0.013	0.20		mg/L	2	12/5/2018 02:07 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	140	0.23	5.0		mg/L	10	12/5/2018 09:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Chloride	2100	4.6	250		mg/L	500	12/5/2018 06:35 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Fluoride	2.2	0.032	0.50		mg/L	5	12/5/2018 02:54 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_181205A** QC Batch: **R130352**				PrepDate			Analyst: **RAB**
Sulfate	490	1.1	25		mg/L	50	12/5/2018 07:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R130352_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	PBW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID	LCS-R130352_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	LCSW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.956	0.50	2.000	0	97.8	90	110				

Sample ID	N033238-002BMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3091.800	250	1000	2084	101	80	120				

Sample ID	N033238-002BMSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3143.550	250	1000	2084	106	80	120	3092	1.66	20	

Sample ID	N033238-015BMS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220683

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3095.850	250	1000	2064	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	N033238-005BDUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220685

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2108.300	250						2047	2.94	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	MB-R130352_F	SampType:	MBLK	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	PBW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220632

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID	LCS-R130352_F	SampType:	LCS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	LCSW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.220	0.10	1.250	0	97.6	90	110				

Sample ID	N033238-003BDUP	SampType:	DUP	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220653

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.949	0.50						1.940	0.489	20	

Sample ID	N033238-005BMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220654

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	7.914	0.50	6.250	2.004	94.6	80	120				

Sample ID	N033238-005BMSD	SampType:	MSD	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220655

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.035	0.50	6.250	2.004	96.5	80	120	7.914	1.51	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID	N033238-008BMS	SampType:	MS	TestCode:	300_W_FPG	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220656

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	8.402	0.50	6.250	2.224	98.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R130352_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	PBW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220712

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID	LCS-R130352_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	LCSW	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220713

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.946	0.50	4.000	0	98.7	90	110				

Sample ID	N033238-008BMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220721

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	705.280	25	200.0	493.3	106	80	120				

Sample ID	N033238-008BMSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220722

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	702.535	25	200.0	493.3	105	80	120	705.3	0.390	20	

Sample ID	N033238-015BMS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	130352
Client ID:	ZZZZZZ	Batch ID:	R130352	TestNo:	EPA 300.0			Analysis Date:	12/5/2018	SeqNo:	3220724

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	678.880	25	200.0	485.4	96.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID **N033238-005BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **130352**
Client ID: **ZZZZZZ** Batch ID: **R130352** TestNo: **EPA 300.0** Analysis Date: **12/5/2018** SeqNo: **3220726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	496.575	25						489.0	1.53	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:25:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**				PrepDate	**12/5/2018**	Analyst: **CEI**
Iron	32	18	20		ug/L	1	12/6/2018 03:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04D-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:31:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	280	18	20		ug/L	1	12/6/2018 04:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	180	18	20		ug/L	1	12/6/2018 04:10 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-901-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:30:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-004		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	33	18	20		ug/L	1	12/6/2018 04:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	CW-04M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 9:20:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	32	18	20		ug/L	1	12/6/2018 04:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-902-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:52:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**				PrepDate	**12/5/2018**	Analyst: **CEI**
Iron	54	18	20		ug/L	1	12/6/2018 05:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-3V-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 11:33:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-011		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**				PrepDate	**12/5/2018**	Analyst: **CEI**
Iron	180	18	20		ug/L	1	12/6/2018 05:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-05M-LF-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 10:47:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-012		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	1900	18	20		ug/L	1	12/6/2018 05:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	OW-01D-Q418
Lab Order:	N033238	**Collection Date:**	12/4/2018 8:41:00 AM
Project:	PG&E Topock - CMP, RC000753.801D	**Matrix:**	GROUNDWATER
Lab ID:	N033238-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_181206B**	QC Batch: **71613**			PrepDate	**12/5/2018**		Analyst: **CEI**
Iron	460	18	20		ug/L	1	12/6/2018 06:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N033238
Project: PG&E Topock - CMP, RC000753.801D

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	MB-71613	SampType:	MBLK	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	PBW	Batch ID:	71613	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/6/2018	SeqNo:	3221935

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID	LCS1-71613	SampType:	LCS	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	LCSW	Batch ID:	71613	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/6/2018	SeqNo:	3221938

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	110.878	20	100.0	0	111	85	115				

Sample ID	N033238-004F-MS1	SampType:	MS	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	ZZZZZZ	Batch ID:	71613	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/6/2018	SeqNo:	3221945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	134.163	20	100.0	32.57	102	75	125				

Sample ID	N033238-004F-MSD	SampType:	MSD	TestCode:	6010_WPGE	Units:	ug/L	Prep Date:	12/5/2018	RunNo:	130366
Client ID:	ZZZZZZ	Batch ID:	71613	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	12/6/2018	SeqNo:	3221946

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	133.393	20	100.0	32.57	101	75	125	134.2	0.575	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ARCUS02 FOLDER N033238-016A
C: 12/6/2018 12:00 AM
R: 12/4/2018
1 of 1

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@crttlgen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com	P.O.# SWA-ASSET-C9817-051
Submitted By: Joe Gatel	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200	Fax:
Title: Environmental Scientist	Sampled By: Jason Mahr		
Signature: Date: 12/4/2018	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.		
I hereby authorize ASSET Labs to perform the tests indicated below.	Signature: Date: 12/4/2018		
Project Name: PG&E Topock - CMP			
Project Number: RC000753.801D			

Matrix: Groundwater x | Sediment; Potable | Soil; NPDES | Other Solid; Surface

EDD Requirement		QA/QC	
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

Sample Receipt Condition

	Y	N
1. Chilled	✓	
2. Headspace		
3. Container Intact	✓	
4. Seal Present		
5. IR number 2		
6. Method of Cooling: ICE		

Sample Temp: 1.1, 1.6, 1.2, 2.0, 1.8

Courier: ASSET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH 250 mL poly	Anions (E300.0); Chloride, Fluoride, Sulfate 1 liter poly	Specific Conductance (E120.1) 1 liter poly	TDS (SM2540C) 1 liter poly	Alkalinity (Total, reported as CaCO3) (SM2320B) 1 liter poly	Turbidity (SM2130B) 1 liter poly	Ammonia as Nitrogen (SM4500-NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500-N03); H2SO4 125 mL poly	MST_CMP_TOC, (SM5310B), H2SO4 3 X VOAs	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn 500 mL poly	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo 500 mL poly	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na 500 mL poly	Dissolved metals (EPA200.7) FF; HNO3 Na 500 mL poly	Dissolved metals (EPA 245.1); HNO3 Mercury 500 mL poly	Total Iron (SW6010B), HNO3 500 mL poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N033238-01	CW-04D-3V-Q418	12/4/2018	9:25		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
2	-02	CW-04D-LF-Q418	12/4/2018	8:31		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
3	-03	CW-04M-LF-Q418	12/4/2018	8:30		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
4	-04	MW-901-Q418	12/4/2018	9:30		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
5	-05	CW-04M-3V-Q418	12/4/2018	9:20		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
6	-06	OW-05S-3V-Q418	12/4/2018	13:05		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
7	-07	OW-05S-LF-Q418	12/4/2018	12:33		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
8	-08	OW-02D-Q418	12/4/2018	9:04		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
9	-09	OW-05D-Q418	12/4/2018	13:49		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
10	-10	MW-902-Q418	12/4/2018	10:50		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT

Reliquished by (Signature and Printed Name): Date/Time: 12/4/18 1700

Reliquished by (Signature and Printed Name): REC: Date/Time: 12/4/18 @ 1740

Reliquished by (Signature and Printed Name): REL AND REC: M. MARTIN Date/Time: 12/4/18 @ 1930

Reliquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
X	C	= 2 Workdays
	D	= 3 Workdays
	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 5% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 2 of 2

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com	P.O.# SWA-ASSET-C9817-051
Submitted By: Joe Gatel		Phone: 949-727-1400, ext 200	Fax:
Title: Environmental Scientist	Phone: 916-786-3302 Fax:		
Signature: Date: 12/4/2018	Sampled By: Susan Martin		
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.		
Project Name: PG&E Topock - CMP	Signature: Date: 12/4/2018		
Project Number: RC000753.801D			

EDD Requirement		QA/QC		Sample Receipt Condition	Y	N
Excel EDD		RTNE		1. Chilled	✓	
Geotracker		RWQCB	✓	2. Headspace		
Labspec		CalTrans		3. Container Intact	✓	
Others	✓	LEVEL III		4. Seal Present		
Specify: RWQCB		LEVEL IV		5. IR number 2		
Global ID:		Regulatory		6. Method of Cooling: ICE		
		Specify State:		Sample Temp: 1.1, 1.6, 1.2, 2.0, 1.8		

Matrix: Groundwater x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2SO4/NH4OH	Anions (E300.0); Chloride, Fluoride, Sulfate	Specific Conductance (E120.1)	TDS (SM2540C)	Alkalinity (Total, reported as CaCO3) (SM2320B)	Turbidity (SM2130B)	Ammonia as Nitrogen (SM4500-NH3D); H2SO4	Nitrate/Nitrite as Nitrogen (SM4500-NO3); H2SO4	MST_CMP_TOC, (SM5310B), H2SO4	Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn	Dissolved metals (EPA200.8) FF; HNO3 Cr, Mo	Dissolved metals (EPA200.7) FF; HNO3 Al, B, Ca, Fe, K, Mg, Na	Dissolved metals (EPA200.7) FF; HNO3 Na	Dissolved metals (EPA 245.1); HNO3 Mercury	Total Iron (SW6010B), HNO3	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
						250 mL poly	1 liter poly	1 liter poly	1 liter poly	1 liter poly	1 liter poly	1 L poly	125 mL poly	3 X VOAs	500 mL poly	500 mL poly	500 mL poly	500 mL poly	500 mL poly	500 mL poly					
1	N033238-11	OW-05M-3V-Q418	12/4/2018	11:33		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
2	-12	OW-05M-LF-Q418	12/4/2018	10:47		x	x	x	x	x	x	x	x		x		x		x	x	C	6	P	BNS	48 Hr TAT
3	-13	OW-02S-Q418	12/4/2018	9:55		x	x	x	x		x		x			x		x			C	4	P	BNS	48 Hr TAT
4	-14	MW-707-Q418	12/4/2018	15:20		X															C	1	P	B	48 Hr TAT
5	-15	OW-01D-Q418	12/4/2018	8:41		X	X	X	X	X	X	X	X		X		X		X	X	C	6	P	BNS	48 Hr TAT
6																					C				48 Hr TAT
7																					C				48 Hr TAT
8																					C				48 Hr TAT
9																					C				48 Hr TAT
10																					C				48 Hr TAT

Courier: ASSET

Tracking No.:

Reliquished by (Signature and Printed Name):	Date/Time: 12/4/18 1755	Reliquished by (Signature and Printed Name): REC:	Date/Time: 12/4/18 @1705
Reliquished by (Signature and Printed Name): REL AND REC: MBOARTIN	Date/Time:	Reliquished by (Signature and Printed Name):	Date/Time: 12/4/18 @1935
Reliquished by (Signature and Printed Name):	Date/Time:	Reliquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
X	C	= 2 Workdays
	D	= 3 Workdays
	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Poly
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	12/4/2018	Workorder:	N033238
Rep sample Temp (Deg C):	1.1/1.6/1.2/2.0/1.8	IR Gun ID:	2

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: MBC For: 12/5/2018

Reviewed By: LG 12052018

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-001A	CW-04D-3V-Q418	12/4/2018 9:25:00 AM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-001B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-001C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-001D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-001E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-001F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-002A	CW-04D-LF-Q418	12/4/2018 8:31:00 AM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-002B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-002C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-002D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-002E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-002F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-003A	CW-04M-LF-Q418	12/4/2018 8:30:00 AM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-003B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-003C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-003D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-003E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-003F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-004A	MW-901-Q418	12/4/2018 9:30:00 AM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-004B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-004C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-004D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-004E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-004F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-005A	CW-04M-3V-Q418	12/4/2018 9:20:00 AM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-005B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-005C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-005D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-005E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-005F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-006A	OW-05S-3V-Q418	12/4/2018 1:05:00 PM	12/6/2018	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-006B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033238-006C			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-006D			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033238-007A	OW-05S-LF-Q418	12/4/2018 12:33:00 PM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-007B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-007C	OW-05S-LF-Q418	12/4/2018 12:33:00 PM	12/6/2018	Groundwater	SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-007D			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033238-008A	OW-02D-Q418	12/4/2018 9:04:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-008B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033238-008C			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-008D			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033238-009A	MW-05D-Q418	12/4/2018 1:49:00 PM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-009B	MW-05D-Q418	12/4/2018 1:49:00 PM	12/6/2018	Groundwater	EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033238-009C			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-009D			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033238-010A	MW-902-Q418	12/4/2018 10:52:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-010B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-010B	MW-902-Q418	12/4/2018 10:52:00 AM	12/6/2018	Groundwater	SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-010C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-010D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-010E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-010F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033238-011A	OW-05M-3V-Q418	12/4/2018 11:33:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-011B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-011B	OW-05M-3V-Q418	12/4/2018 11:33:00 AM	12/6/2018	Groundwater	SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-011C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-011D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-011E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-011F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033238-012A	OW-05M-LF-Q418	12/4/2018 10:47:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-012B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-012B	OW-05M-LF-Q418	12/4/2018 10:47:00 AM	12/6/2018	Groundwater	SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-012C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-012D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-012E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-012F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033238-013A	OW-02S-Q418	12/4/2018 9:55:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-013B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N033238-013C			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-013D	OW-02S-Q418	12/4/2018 9:55:00 AM	12/6/2018	Groundwater		AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N033238-014A	MW-707-Q418	12/4/2018 3:20:00 PM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-015A	OW-01D-Q418	12/4/2018 8:41:00 AM	12/6/2018		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N033238-015B			12/6/2018		EPA 120.1	SPECIFIC CONDUCTANCE	☐	☐	☐	WW
			12/6/2018		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			12/6/2018			Total Dissolved Solids Prep	☐	☐	☐	WW
			12/6/2018		SM 2130B	TURBIDITY	☐	☐	☐	WW
			12/6/2018		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			12/6/2018		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N033238-015C			12/6/2018		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	☐	☐	☑	SUB
N033238-015D			12/6/2018		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N033238-015E			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 200.7	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			12/6/2018			AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

05-Dec-18

WorkOrder: N033238

Client ID: ARCUS02

Project: PG&E Topock - CMP, RC000753.801D **QC Level:** Level IV **Date Received:** 12/4/2018

Comments: Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N033238-015E	OW-01D-Q418	12/4/2018 8:41:00 AM	12/6/2018	Groundwater	EPA 200.8	DISSOLVED METALS BY ICPMS	☐	☐	☐	WW
			12/6/2018		EPA 200.8	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			12/6/2018		EPA 245.1	DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	WW
			12/6/2018			DISSOLVED MERCURY PREP	☐	☐	☐	WW
N033238-015F			12/6/2018		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			12/6/2018		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N033238-016A	FOLDER	12/6/2018	12/6/2018		EDD	RWQCB	☐	☐	☐	LAB
			12/6/2018		Folder	Folder	☐	☐	☐	LAB
			12/6/2018		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler:

05-Dec-18

				Requested Tests		
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	**SM4500-NH3D**		
N033238-001C / CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	8OZP	1		
N033238-002C / CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	8OZP	1		
N033238-003C / CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	8OZP	1		
N033238-004C / MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	8OZP	1		
N033238-005C / CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	8OZP	1		
N033238-010C / MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	8OZP	1		
N033238-011C / OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	8OZP	1		
N033238-012C / OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	8OZP	1		
N033238-015C / OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	8OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33238A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.

Please analyze for Ammonia by SM4500-NH3D. EDD Requirement Labspec7 edata.

GSO #: 543011865

		Date/Time		Date/Time
Relinquished by:		12/5/2018 17:00	**Received by:**	
Relinquished by:			**Received by:**	

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841

TEL: +1 714 895 5494
FAX:
Acct #:

Field Sampler: Jason Mahn

05-Dec-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM4500-NO3F		
N033238-001D / CW-04D-3V-Q418	Groundwater	12/4/2018 9:25:00 AM	8OZP	1		
N033238-002D / CW-04D-LF-Q418	Groundwater	12/4/2018 8:31:00 AM	8OZP	1		
N033238-003D / CW-04M-LF-Q418	Groundwater	12/4/2018 8:30:00 AM	8OZP	1		
N033238-004D / MW-901-Q418	Groundwater	12/4/2018 9:30:00 AM	8OZP	1		
N033238-005D / CW-04M-3V-Q418	Groundwater	12/4/2018 9:20:00 AM	8OZP	1		
N033238-006C / OW-05S-3V-Q418	Groundwater	12/4/2018 1:05:00 PM	8OZP	1		
N033238-007C / OW-05S-LF-Q418	Groundwater	12/4/2018 12:33:00 PM	8OZP	1		
N033238-008C / OW-02D-Q418	Groundwater	12/4/2018 9:04:00 AM	8OZP	1		
N033238-009C / OW-05D-Q418	Groundwater	12/4/2018 1:49:00 PM	8OZP	1		
N033238-010D / MW-902-Q418	Groundwater	12/4/2018 10:52:00 AM	8OZP	1		
N033238-011D / OW-05M-3V-Q418	Groundwater	12/4/2018 11:33:00 AM	8OZP	1		
N033238-012D / OW-05M-LF-Q418	Groundwater	12/4/2018 10:47:00 AM	8OZP	1		
N033238-013C / OW-02S-Q418	Groundwater	12/4/2018 9:55:00 AM	8OZP	1		
N033238-015D / OW-01D-Q418	Groundwater	12/4/2018 8:41:00 AM	8OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33238B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.

Please analyzed for NO3- by SM4500. EDD Requirement Labspec7 edata.

GSO #: 543011997

		Date/Time		Date/Time
Relinquished by:		12/5/2018 17:00	**Received by:**	
Relinquished by:			**Received by:**	

Date of Report: 12/12/2018

Marlon Cartin

ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Client Project:	N033238
BCL Project:	Level IV
BCL Work Order:	1837987
Invoice ID:	B324947

Enclosed are the results of analyses for samples received by the laboratory on 12/6/2018. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1000828689

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Stuart Buttram
Technical Director

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Chain of Custody and Cooler Receipt Form for 1837987 Page 1 of 2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

18-37987

QC Level: Level IV

Subcontractor:
BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler:

05-Dec-18

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM4500-NH3D		
N033238-001C / CW-04D-3V-Q418 -1	Groundwater	12/4/2018 9:25:00 AM	8OZP	1		
N033238-002C / CW-04D-LF-Q418 -2	Groundwater	12/4/2018 8:31:00 AM	8OZP	1		
N033238-003C / CW-04M-LF-Q418 -3	Groundwater	12/4/2018 8:30:00 AM	8OZP	1		
N033238-004C / MW-901-Q418 -4	Groundwater	12/4/2018 9:30:00 AM	8OZP	1		
N033238-005C / CW-04M-3V-Q418 -5	Groundwater	12/4/2018 9:20:00 AM	8OZP	1		
N033238-010C / MW-902-Q418 -6	Groundwater	12/4/2018 10:52:00 AM	8OZP	1		
N033238-011C / OW-05M-3V-Q418 -7	Groundwater	12/4/2018 11:33:00 AM	8OZP	1		
N033238-012C / OW-05M-LF-Q418 -8	Groundwater	12/4/2018 10:47:00 AM	8OZP	1		
N033238-015C / OW-01D-Q418 -9	Groundwater	12/4/2018 8:41:00 AM	8OZP	1		

CHK BY
DISTRIBUTION
SUB-OUT

RUSH!

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.
Please use PO#:N33238A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.
Please analyze for Ammonia by SM4500-NH3D. EDD Requirement Labspec7 edata.

GSO #: 543011865

	Date/Time		Date/Time
Relinquished by:	12/5/2018 17:00	Received by:	12-Le-18 09:08
Relinquished by:		Received by:	

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Chain of Custody and Cooler Receipt Form for 1837987 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 18-37987

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☐ Other ☑ (Specify) GSO	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)	YES ☐ NO ☐ W / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: .97 Container: Ppe Thermometer ID: 274 Date/Time 12.10.18

Temperature: (A) 2.9 °C / (C) 2.6 °C Analyst Init ND 09.08

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS	A	A	A	A	A	A	A	A	A	
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: JM Date/Time: 12/10/18 1054

A = Actual / C = Corrected

Rev 21 05/23/2016

(S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20)

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1837987-01	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 09:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-001C / CW-04D-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-02	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 08:31
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-002C / CW-04D-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-03	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 08:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-003C / CW-04M-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-04	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-004C / MW-901-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-05	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 09:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-005C / CW-04M-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-06	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 10:52
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-010C / MW-902-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-07	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 11:33
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-011C / OW-05M-3V-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1837987-08	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 10:47
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-012C / OW-05M-LF-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater
1837987-09	**COC Number:**	---	**Receive Date:**	12/06/2018 09:08
	Project Number:	---	**Sampling Date:**	12/04/2018 08:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	N033238-015C / OW-01D-Q418	**Lab Matrix:**	Water
	Sampled By:	---	**Sample Type:**	Groundwater

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-01 | **Client Sample Name:** N033238-001C / CW-04D-3V-Q418, 12/4/2018 9:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:04	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-02 | **Client Sample Name:** N033238-002C / CW-04D-LF-Q418, 12/4/2018 8:31:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:05	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
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Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-03 | **Client Sample Name:** N033238-003C / CW-04M-LF-Q418, 12/4/2018 8:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:07	JMH	SC-1	1	B032281

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3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-04 | **Client Sample Name:** N033238-004C / MW-901-Q418, 12/4/2018 9:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:09	JMH	SC-1	1	B032281

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3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-05 | **Client Sample Name:** N033238-005C / CW-04M-3V-Q418, 12/4/2018 9:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:09	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-06 | **Client Sample Name:** N033238-010C / MW-902-Q418, 12/4/2018 10:52:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:11	JMH	SC-1	1	B032281

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Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-07 | **Client Sample Name:** N033238-011C / OW-05M-3V-Q418, 12/4/2018 11:33:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:11	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-08 | **Client Sample Name:** N033238-012C / OW-05M-LF-Q418, 12/4/2018 10:47:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:12	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

BCL Sample ID: 1837987-09 | **Client Sample Name:** N033238-015C / OW-01D-Q418, 12/4/2018 8:41:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distilled)	ND	mg/L	0.20		SM-4500-NH3G	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-4500-NH3G	12/11/18 11:48	12/11/18 16:13	JMH	SC-1	1	B032281

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: B032281						
Ammonia as N (Distilled)	B032281-BLK1	ND	mg/L	0.20		

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: B032281										
Ammonia as N (Distilled)	B032281-BS1	LCS	0.99020	1.0000	mg/L	99.0		85 - 115		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: B032281	Used client sample: Y - Description: N033238-001C / CW-04D-3V-Q418, 12/04/2018 09:25										
Ammonia as N (Distilled)	DUP	1837987-01	0.25500	ND		mg/L			20		
	MS	1837987-01	0.25500	5.2525	5.0000	mg/L		100		80 - 120	
	MSD	1837987-01	0.25500	5.0795	5.0000	mg/L	3.3	96.5	20	80 - 120	

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ASSET Laboratories- Las Vegas
3151-3153 W. Post Rd
Las Vegas, NV 89118

Reported: 12/12/2018 9:08
Project: Level IV
Project Number: N033238
Project Manager: Marlon Cartin

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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WORK ORDER NUMBER: 18-12-0460

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Asset Laboratories

Client Project Name: N033238

Attention: Marlon Cartin
3151 West Post Road
Las Vegas, NV 89118-3859

Approved for release on 12/07/2018 by:
Don Burley
Project Manager

ResultLink

Email your PM

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 18-12-0460

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Work Order Narrative

Work Order: 18-12-0460 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/06/18. They were assigned to Work Order 18-12-0460.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

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Sample Summary

Client:	Asset Laboratories	Work Order:	18-12-0460
	3151 West Post Road	Project Name:	N033238
	Las Vegas, NV 89118-3859	PO Number:	N33238B
		Date/Time Received:	12/06/18 10:15
		Number of Containers:	14
Attn:	Marlon Cartin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
N033238-001D / CW-04D-3V-Q418	18-12-0460-1	12/04/18 09:25	1	Aqueous
N033238-002D / CW-04D-LF-Q418	18-12-0460-2	12/04/18 08:31	1	Aqueous
N033238-003D / CW-04M-LF-Q418	18-12-0460-3	12/04/18 08:30	1	Aqueous
N033238-004D / MW-901-Q418	18-12-0460-4	12/04/18 09:30	1	Aqueous
N033238-005D / CW-04M-3V-Q418	18-12-0460-5	12/04/18 09:20	1	Aqueous
N033238-006C / OW-05S-3V-Q418	18-12-0460-6	12/04/18 13:05	1	Aqueous
N033238-007C / OW-05S-LF-Q418	18-12-0460-7	12/04/18 12:33	1	Aqueous
N033238-008C / OW-02D-Q418	18-12-0460-8	12/04/18 09:04	1	Aqueous
N033238-009C / OW-05D-Q418	18-12-0460-9	12/04/18 13:49	1	Aqueous
N033238-010D / MW-902-Q418	18-12-0460-10	12/04/18 10:52	1	Aqueous
N033238-011D / OW-05M-3V-Q418	18-12-0460-11	12/04/18 11:33	1	Aqueous
N033238-012D / OW-05M-LF-Q418	18-12-0460-12	12/04/18 10:47	1	Aqueous
N033238-013C / OW-02S-Q418	18-12-0460-13	12/04/18 09:55	1	Aqueous
N033238-015D / OW-01D-Q418	18-12-0460-14	12/04/18 08:41	1	Aqueous

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Analytical Report

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033238

Date Received: 12/06/18
Work Order: 18-12-0460
Preparation: N/A
Method: SM 4500-NO3 E
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-001D / CW-04D-3V-Q418	**18-12-0460-1-A**	**12/04/18 09:25**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-002D / CW-04D-LF-Q418	**18-12-0460-2-A**	**12/04/18 08:31**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	3.0	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-003D / CW-04M-LF-Q418	**18-12-0460-3-A**	**12/04/18 08:30**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.6	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-004D / MW-901-Q418	**18-12-0460-4-A**	**12/04/18 09:30**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-005D / CW-04M-3V-Q418	**18-12-0460-5-A**	**12/04/18 09:20**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.7	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-006C / OW-05S-3V-Q418	**18-12-0460-6-A**	**12/04/18 13:05**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	3.0	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-007C / OW-05S-LF-Q418	**18-12-0460-7-A**	**12/04/18 12:33**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.9	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-008C / OW-02D-Q418	**18-12-0460-8-A**	**12/04/18 09:04**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.6	1.0	10.0	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033238

Date Received: 12/06/18
Work Order: 18-12-0460
Preparation: N/A
Method: SM 4500-NO3 E
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-009C / OW-05D-Q418	**18-12-0460-9-A**	**12/04/18 13:49**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.4	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-010D / MW-902-Q418	**18-12-0460-10-A**	**12/04/18 10:52**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.1	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-011D / OW-05M-3V-Q418	**18-12-0460-11-A**	**12/04/18 11:33**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.8	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-012D / OW-05M-LF-Q418	**18-12-0460-12-A**	**12/04/18 10:47**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.6	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-013C / OW-02S-Q418	**18-12-0460-13-A**	**12/04/18 09:55**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	3.0	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
N033238-015D / OW-01D-Q418	**18-12-0460-14-A**	**12/04/18 08:41**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	2.5	1.0	10.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-282-705**	**N/A**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Result	RL	DF	Qualifiers
Nitrate-Nitrite (as N)	ND	0.10	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Asset Laboratories		Date Received:	12/06/18
3151 West Post Road		Work Order:	18-12-0460
Las Vegas, NV 89118-3859		Preparation:	N/A
		Method:	SM 4500-NO3 E
Project: N033238			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
N033238-010D / MW-902-Q418	**Sample**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3S4**
N033238-010D / MW-902-Q418	**Matrix Spike**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3S4**
N033238-010D / MW-902-Q418	**Matrix Spike Duplicate**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3S4**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate-Nitrite (as N)	2.068	5.000	7.334	105	7.585	110	70-130	3	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Asset Laboratories
3151 West Post Road
Las Vegas, NV 89118-3859

Project: N033238

Date Received: 12/06/18
Work Order: 18-12-0460
Preparation: N/A
Method: SM 4500-NO3 E
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-282-705	**LCS**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**
099-14-282-705	**LCSD**	**Aqueous**	**UV 7**	**12/07/18**	**12/07/18 16:21**	**I1207NO3L4**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate-Nitrite (as N)	0.5000	0.5050	101	0.5050	101	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 18-12-0460 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
SM 4500-NO3 E	N/A	1139	UV 7	1

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Glossary of Terms and Qualifiers

Work Order: 18-12-0460 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:
Eurofins Calscience, Inc.
7440 Lincoln Way
Garden Grove, CA 92841

TEL: +1 714 895 5494
FAX:
Acct #:

Field Sampler: Jason Mahn

18-12-0460 05-Dec-18

Sample ID		Matrix	Date Collected	Bottle Type	Requested Tests SM4500-NO3F		
N033238-001D / CW-04D-3V-Q418	1	Groundwater	12/4/2018 9:25:00 AM	8OZP	1		
N033238-002D / CW-04D-LF-Q418	2	Groundwater	12/4/2018 8:31:00 AM	8OZP	1		
N033238-003D / CW-04M-LF-Q418	3	Groundwater	12/4/2018 8:30:00 AM	8OZP	1		
N033238-004D / MW-901-Q418	4	Groundwater	12/4/2018 9:30:00 AM	8OZP	1		
N033238-005D / CW-04M-3V-Q418	5	Groundwater	12/4/2018 9:20:00 AM	8OZP	1		
N033238-006C / OW-05S-3V-Q418	6	Groundwater	12/4/2018 1:05:00 PM	8OZP	1		
N033238-007C / OW-05S-LF-Q418	7	Groundwater	12/4/2018 12:33:00 PM	8OZP	1		
N033238-008C / OW-02D-Q418	8	Groundwater	12/4/2018 9:04:00 AM	8OZP	1		
N033238-009C / OW-05D-Q418	9	Groundwater	12/4/2018 1:49:00 PM	8OZP	1		
N033238-010D / MW-902-Q418	10	Groundwater	12/4/2018 10:52:00 AM	8OZP	1		
N033238-011D / OW-05M-3V-Q418	11	Groundwater	12/4/2018 11:33:00 AM	8OZP	1		
N033238-012D / OW-05M-LF-Q418	12	Groundwater	12/4/2018 10:47:00 AM	8OZP	1		
N033238-013C / OW-02S-Q418	13	Groundwater	12/4/2018 9:55:00 AM	8OZP	1		
N033238-015D / OW-01D-Q418	14	Groundwater	12/4/2018 8:41:00 AM	8OZP	1		

Please CC Report to Lucille Golosinda at lucille.golosinda@assetlaboratories.com

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N33238B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 1-day TAT.

Please analyzed for NO3- by SM4500. EDD Requirement Labspec7 edata.

GSO #: 543011997

		Date/Time			Date/Time
Relinquished by:	[signature]	12/5/2018 17:00	**Received by:**	[signature] - EC	12/6/18 [initials]
Relinquished by:	(GSO)		**Received by:**		

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GSO | a GLS company GLS

800-322-5555
www.gso.com

Ship From
ADVANCED TECHNOLOGY LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
EUROFINS CALSCIENCE
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 543011997

PDS

0460

ORC **C**
GARDEN GROVE

S92841A

94802324

Print Date: 12/5/2018 2:51 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the GSO service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gso.com.

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WORK ORDER NUMBER: 18-12-0460

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: ASSET Labs.

DATE: 12/06/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: 0.0°C); Temperature (w/o CF): 2.8 °C (w/ CF): 2.8 °C; ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☑ Filter Checked by: WFJO

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: WFJO

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: WFJO

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☑	☐	☐
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9) ☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☐ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB ☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☑ 250PJs (pH<2) ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (___) ☐ EnCores® (___) ☐ TerraCores® (___) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na₂** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: WFJO

Reviewed by: MWL2

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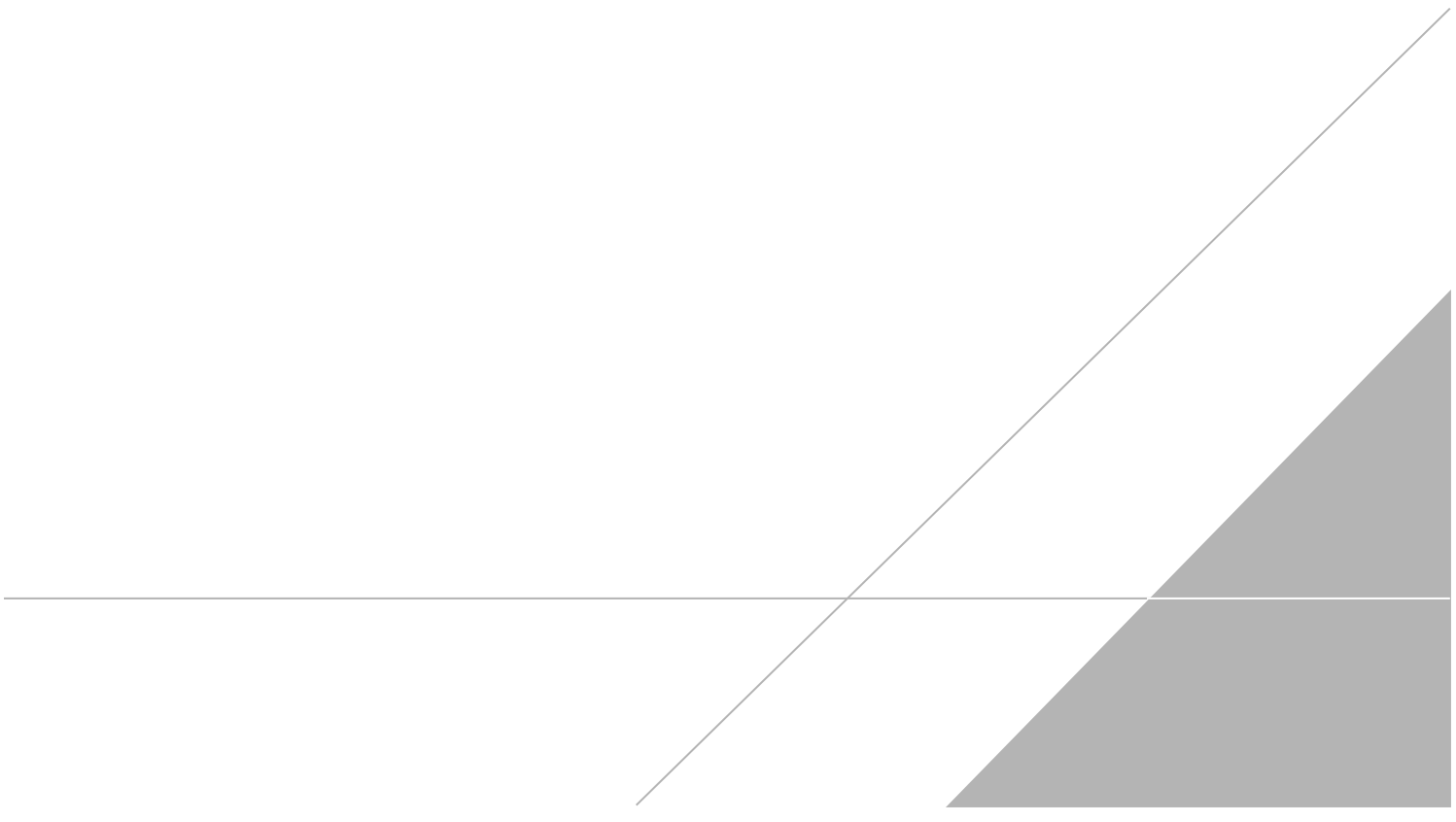
APPENDIX B

Field Data Collection Sheets (provided on CD-ROM only)



ARCADIS for natural and built assets

GROUNDWATER ELEVATION DATA

PROJECT NAME: PG&E Topock CMP
PROJECT LOCATION: Needles, California
MEASUREMENT DATE: 2/23/18
PERSONNEL ON SITE: MJ

PROJECT NO.: RC000753.801B
TASK: CMP quarterly snapshot
MEASURING DEVICE: Water level indicator
WEATHER CONDITIONS: ——

Monitoring Well Number	Date	Time	Depth to Groundwater (ft btoc)	COMMENTS
CW-1D	2/23/18	0757	110.23	—
CW-1M	2/23/18	0800	110.25	—
CW-2D	2/23/18	0745	93.39	—
CW-2M	2/23/18	0747	93.77	—
CW-3D	2/23/18	0750	77.99	—
CW-3M	2/23/18	0753	78.70	—
CW-4D	2/23/18	0825	62.44	—
CW-4M	2/23/18	0828	62.63	—
OW-1D	2/23/18	0820	94.20	—
OW-1M	2/23/18	0822	94.52	—
OW-1S	2/23/18	0825	94.79	—
OW-2D	2/23/18	0812	92.51	—
OW-2M	2/23/18	0815	92.60	—
OW-2S	2/23/18	0817	93.43	—
OW-5D	2/23/18	0805	95.51	—
OW-5M	2/23/18	0807	95.12	—
OW-5S	2/23/18	0809	96.14	—
				—

ARCADIS for natural and built assets

GROUNDWATER ELEVATION DATA

PROJECT NAME: PG&E Topock CMP
PROJECT LOCATION: Needles, California
MEASUREMENT DATE: 5/3/18
PERSONNEL ON SITE: MT

PROJECT NO.: RC000753.801B
TASK: CMP quarterly snapshot
MEASURING DEVICE: Water level indicator
WEATHER CONDITIONS: —

Monitoring Well Number	Date	Time	Depth to Groundwater (ft btoc)	COMMENTS
CW-1D	5/3/18	0945	109.04	—
CW-1M	5/3/18	0943	108.98	—
CW-2D	5/3/18	0951	91.~~98~~95 E	—
CW-2M	5/3/18	0949	92.31	—
CW-3D	5/3/18	0956	70.57	—
CW-3M	5/3/18	0954	77.14	—
CW-4D	5/3/18	0905	61.17	—
CW-4M	5/3/18	0902	61.33	—
OW-1D	5/3/18	0939	92.49	—
OW-1M	5/3/18	0938	93.07	—
OW-1S	5/3/18	0935	93.20	—
OW-2D	5/3/18	0933	90.~~82~~72 E	—
OW-2M	5/3/18	0932	91.07	—
OW-2S	5/3/18	0930	91.82	—
OW-5D	5/3/18	0928	94.77	—
OW-5M	5/3/18	0925	94.20	—
OW-5S	5/3/18	0922	94.72	—

ARCADIS for natural and built assets

GROUNDWATER ELEVATION DATA

PROJECT NAME: PG&E Topock CMP
PROJECT LOCATION: Needles, California
MEASUREMENT DATE: 9/5/18
PERSONNEL ON SITE: JM

PROJECT NO.: RC000753.801B
TASK: CMP quarterly snapshot
MEASURING DEVICE: Water level indicator
WEATHER CONDITIONS: ———

Monitoring Well Number	Date	Time	Depth to Groundwater (ft btoc)	COMMENTS
CW-1D	9/5/18	0703	114.25	—
CW-1M	9/5/18	0705	114.21	—
CW-2D	9/5/18	0737	92.22	—
CW-2M	9/5/18	0739	92.72	—
CW-3D	9/5/18	0744	76.84	—
CW-3M	9/5/18	0742	77.55	—
CW-4D	9/5/18	0759	61.22	—
CW-4M	9/5/18	0757	61.51	—
OW-1D	9/5/18	0732	92.01	—
OW-1M	9/5/18	0730	93.47	—
OW-1S	9/5/18	0728	93.60	—
OW-2D	9/5/18	0721	91.38	—
OW-2M	9/5/18	0725	91.60	—
OW-2S	9/5/18	0723	92.23	—
OW-5D	9/5/18	0713	94.32	—
OW-5M	9/5/18	0711	94.15	—
OW-5S	9/5/18	0709	95.22	—

ARCADIS for natural and built assets

GROUNDWATER ELEVATION DATA

PROJECT NAME: PG&E Topock CMP
PROJECT LOCATION: Needles, California
MEASUREMENT DATE: 12/3/18
PERSONNEL ON SITE: SD

PROJECT NO.: RC000753.801B
TASK: CMP quarterly snapshot
MEASURING DEVICE: Water level indicator
WEATHER CONDITIONS: —

Monitoring Well Number	Date	Time	Depth to Groundwater (ft btoc)	COMMENTS
CW-1D	12/3/18	1248	109.51	—
CW-1M	12/3/18	1250	109.44	—
CW-2D	12/3/18	1410	92.58	—
CW-2M	12/3/18	1412	93.08	—
CW-3D	12/3/18	1413	77.40	—
CW-3M	12/3/18	1415	78.05	—
CW-4D	12/3/18	1402	61.75	—
CW-4M	12/3/18	1404	62.00	—
OW-1D	12/3/18	1307	93.50	—
OW-1M	12/3/18	1305	93.92	—
OW-1S	12/3/18	1300	94.03	—
OW-2D	12/3/18	1314	91.08	—
OW-2M	12/3/18	1312	92.08	—
OW-2S	12/3/18	1315	92.70	—
OW-5D	12/3/18	1336	94.91	—
OW-5M	12/3/18	1328	94.40	—
OW-5S	12/3/18	1323	95.51	—

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-01D-3V

Date	06/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	108.40
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	31.25
Location	Topock, CA	Sampler	Matthew Trainotti	Measured Well Depth (ft bmp)	300
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	93.75
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	191.6
		Pump Intake Depth (ft bmp)		Purge Date	06/04/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:52	2	15	30.5	7.65	6443	10.4	4.99	4	108.50	3.48	4.18
14:00	2	31	30.5	7.66	6443	14.4	5.03	4	108.50	3.48	4.18
14:08	2	46	30.6	7.67	6439	18.3	5.10	3	108.50	3.48	4.17
14:15	2	60	30.0	7.69	6436	21.9	4.99	3	108.50	3.48	4.17
14:30	2	93	30.3	7.67	6432	24.5	4.72	3	108.50	3.48	4.17

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/04/2018	Double Filter Turbidity	--
Sample Time	14:35	Color	Clear
Sample ID	CW-01D-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	15:00
Without Filter Turbidity	3	EB Sample ID	MW-726-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-01D-LF

Date	06/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	108.40
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	31.28
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	300.20
Purge Method	Low Flow	Casing Material	Stainless Steel	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	191.8
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	267	Purge Date	06/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:08	500	2000	30.5	7.24	6454	88.8	8.35	4	108.40	3.48	4.19
13:12	500	4000	31.0	7.51	6482	71.0	8.28	3	108.40	3.50	4.18
13:16	500	6000	30.9	7.58	6441	63.9	8.32	3	108.40	3.50	4.19
13:20	500	8000	31.4	7.61	6478	62.8	8.16	3	108.40	3.50	4.20
13:24	500	10000	31.4	7.63	6483	60.1	8.23	3	108.40	3.50	4.19

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/04/2018	Double Filter Turbidity	--
Sample Time	13:25	Color	Clear
Sample ID	CW-01D-LF-Q218	Odor	None
Duplicate Sample ID	MW-901-Q218	MS/MSD Sample Time	--
Dup Sample Time	13:35	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-01M-3V

Date	06/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	108.37
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	13.35
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	190.21
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	40.05
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	81.84
		Pump Intake Depth (ft bmp)	175	Purge Date	06/04/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
14:08	2	8	29.39	7.54	6720	70.5	6.65	1	109.1	3.65	4.36
14:12	2	16	29.35	7.53	6718	66.3	6.68	1	109.1	3.65	4.36
14:16	2	24	29.33	7.53	6722	64.5	6.65	1	109.1	3.65	4.36
14:20	2	32	29.33	7.54	6721	66.2	6.65	1	109.1	3.65	4.36
14:25	2	42	29.33	7.54	6716	65.8	6.71	1	109.1	3.65	4.36

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/04/2018	Double Filter Turbidity	--
Sample Time	14:26	Color	Clear
Sample ID	CW-01M-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	14:45
Without Filter Turbidity	1	EB Sample ID	MW-725-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?		X		
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-01M-LF

Date	06/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	108.37
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	13.35
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	190.21
Purge Method	Low Flow	Casing Material		Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	81.84
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	175	Purge Date	06/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:38	500	2000	30.47	7.54	6721	115.1	7.68	3	108.50	3.65	4.36
13:42	500	4000	31.66	7.57	6737	71.0	7.23	3	108.50	3.65	4.37
13:46	500	6000	32.37	7.57	6753	59.0	6.14	2	108.50	3.65	4.37
13:50	500	8000	32.19	7.57	6759	60.1	5.99	2	108.50	3.65	4.37
13:54	500	10000	32.19	7.57	6755	59.5	5.84	2	108.50	3.65	4.37

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/04/2018	Double Filter Turbidity	--
Sample Time	13:55	Color	Clear
Sample ID	CW-01M-LF-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-02D-3V

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.47
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	43.000
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	355.10
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	129.000
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	263.630
		Pump Intake Depth (ft bmp)	317	Purge Date	06/06/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:44	2	26	28.8	8.08	6427	77.7	6.79	2	91.50	3.46	4.17
08:57	2	52	29.9	8.05	6396	75.9	6.96	2	91.50	3.46	4.15
09:10	2	78	28.6	8.14	6429	74.8	7.05	3	91.50	3.48	4.17
09:23	2	104	29.7	8.06	6377	73.4	7.12	3	91.50	3.45	4.14
09:36	2	130	29.7	8.06	6381	71.2	7.20	3	91.50	3.45	4.15

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	09:40	Color	Clear
Sample ID	CW-02D-3V-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-02D-LF

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.45
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	43.003
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	355.10
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	263.650
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	317	Purge Date	06/06/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
07:56	500	2000	30.2	7.99	6373	68.5	6.22	3	91.47	3.45	4.14
08:00	500	4000	30.2	8.02	6378	68.0	6.55	3	91.47	3.45	4.14
08:04	500	6000	30.2	8.07	6394	70.7	7.96	2	91.47	3.46	4.16
08:08	500	8000	30.3	8.06	6399	72.3	8.04	2	91.47	3.46	4.16
08:12	500	10000	30.3	8.05	6401	74.8	8.11	2	91.47	3.46	4.16

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	08:15	Color	Clear
Sample ID	CW-02D-LF-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?			X	
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-02M-3V

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.91
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.97
Location	Topock, CA	Sampler		Measured Well Depth (ft bmp)	202.11
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	53.91
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	110.2
		Pump Intake Depth (ft bmp)		Purge Date	06/05/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:39	1.5	15	29.84	7.87	6720	-52.7	6.48	4	92.05	3.65	4.36
08:49	1.5	30	29.88	7.87	6714	-49.5	6.35	4	92.05	3.65	4.36
08:59	1.5	45	29.87	7.87	6717	-49.9	6.27	4	92.05	3.65	4.36
09:07	1	53	29.91	7.87	6718	-50.5	6.29	4	92.05	3.65	4.36
09:11	1	57	29.93	7.87	6715	-50.3	6.17	4	92.05	3.65	4.36

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	09:12	Color	Clear
Sample ID	CW-02M-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-02M-LF

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.91
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.97
Location	Topock, CA	Sampler		Measured Well Depth (ft bmp)	202.11
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	110.2
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	170	Purge Date	06/06/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:00	500	2000	29.68	7.87	6674	-62.2	7.21	65	91.95	3.62	4.33
08:08	500	6000	29.79	7.87	6663	-56.7	6.66	15	91.95	3.62	4.33
08:12	500	8000	29.76	7.87	6665	-56.8	6.42	5	91.95	3.62	4.33
08:16	500	10000	29.81	7.87	6663	-57.5	6.35	4	91.95	3.62	4.33
08:20	500	12000	29.79	7.87	6661	-58.1	6.28	4	91.95	3.62	4.33

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	08:21	Color	Clear
Sample ID	CW-02M-LF-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-03D-3V

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	76.30
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	43.019
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	340.05
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	129.057
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	263.750
		Pump Intake Depth (ft bmp)		Purge Date	06/05/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:36	2	26	31.3	8.11	6404	32.4	6.08	5	76.33	3.46	4.16
13:49	2	52	31.4	8.08	6399	30.01	6.03	4	76.33	3.45	4.16
14:02	2	78	31.3	8.16	6420	34.3	6.17	3	76.33	3.47	4.17
14:15	2	104	31.2	8.11	6361	29.4	6.23	3	76.33	3.43	4.13
14:28	2	130	31.3	8.12	6360	29.4	6.28	3	76.33	3.43	4.13

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	
Sample Time	14:30	Color	Clear
Sample ID	CW-03D-3V-Q218	Odor	none
Duplicate Sample ID	MW-902-Q218	MS/MSD Sample Time	--
Dup Sample Time	14:40	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	14:50
Without Filter Turbidity	2	EB Sample ID	MW-727-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-03D-LF

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	76.25
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	297	Purge Date	06/05/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:51	500	2000	32.0	8.06	6397	47.2	5.90	8	76.30	3.45	4.16
12:55	500	4000	31.6	8.08	6401	41.7	6.04	9	76.30	3.45	4.16
12:59	500	6000	31.7	8.09	6400	39.7	6.03	7	76.30	3.46	4.16
13:03	500	8000	31.5	8.09	6404	37.5	6.11	7	76.30	3.46	4.16
13:07	500	10000	31.5	8.09	6405	36.7	6.10	7	76.30	3.46	4.16

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	13:12	Color	Clear
Sample ID	CW-03D-LF-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	7	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-03M-3V

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	76.73
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	23.72
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	222.15
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	71.16
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	145.42
		Pump Intake Depth (ft bmp)		Purge Date	06/05/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:37	1.5	15	30.91	7.74	7352	-50.6	3.71	4	76.90	4.01	4.77
13:47	1.5	30	30.94	7.74	7339	-54.3	3.79	4	76.90	4.00	4.76
13:57	1.5	45	30.97	7.74	7366	-55.1	3.77	4	76.90	4.02	4.78
14:07	1.5	60	31.04	7.74	7341	-50.1	3.88	4	76.90	4.01	4.77
14:17	1.5	75	31.04	7.74	7319	-51.2	3.85	4	76.90	3.99	4.75

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	14:18	Color	Clear
Sample ID	CW-03M-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	14:30
Without Filter Turbidity	4	EB Sample ID	MW-728-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-03M-LF

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	76.73
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	23.72
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	222.15
Purge Method	Low Flow	Casing Material		Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	145.42
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	197	Purge Date	06/05/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:53	500	2000	30.49	7.76	7584	-56.2	3.07	15	76.75	4.14	4.92
12:57	500	4000	30.81	7.75	7427	-56.9	3.27	6	76.75	4.05	4.82
13:01	500	6000	31.02	7.74	7369	-53.9	3.23	5	76.75	4.02	4.79
13:05	500	8000	31.08	7.74	7351	-55.4	3.22	5	76.75	4.01	4.78
13:09	500	10000	31.41	7.74	7372	-62.1	3.18	4	76.75	4.02	4.79

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	13:10	Color	Clear
Sample ID	CW-03M-LF-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-04D-3V

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	60.73
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.039
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	300.08
Purge Method	Extraction Port	Casing Material	PVC	Total Volume to Remove	117.117
Purge Volume Units	gal	Casing Diameter (in)	2	Water Column in Well	239.350
Sampling Type	Volume Purge – Grundfos RF2	Pump Intake Depth (ft bmp)	267	Purge Date	06/05/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
09:47	2	24	30.5	7.87	6353	46.0	7.53	2	60.77	3.43	4.12
10:06	2	48	30.5	7.88	6319	31.1	7.50	2	60.77	3.41	4.10
10:17	2	72	30.5	7.89	6326	27.8	7.46	2	60.77	3.42	4.10
10:29	2	96	30.3	7.88	6362	27.4	7.45	2	60.77	3.44	4.13
10:39	2	118	30.5	7.86	6375	32.0	7.42	2	60.77	3.44	4.13

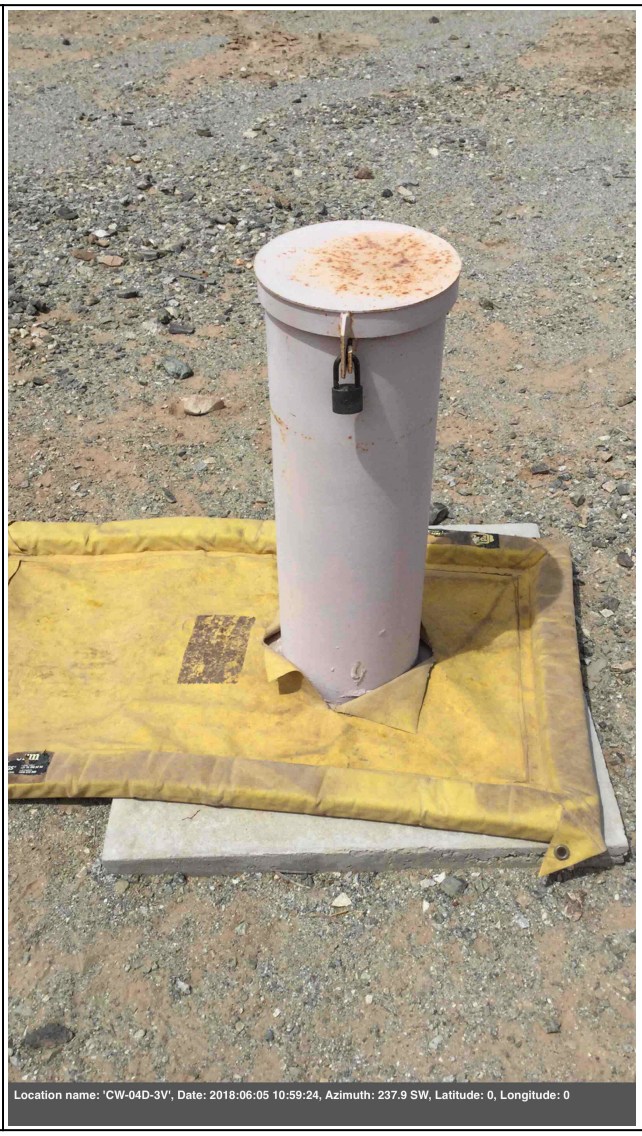
Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	10:40	Color	Clear
Sample ID	CW-04D-3V-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-04D-LF

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	60.73
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.529
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	303.08
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	242.350
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	267	Purge Date	06/05/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
09:04	500	2000	30.9	7.83	6352	57.5	7.48	6	60.75	3.43	4.12
09:08	500	4000	30.6	7.84	6346	54.0	7.38	5	60.75	3.43	4.12
09:12	500	6000	30.6	7.84	6324	54.5	7.23	14	60.75	3.42	4.11
09:16	500	8000	30.6	7.85	6317	56.3	7.35	15	60.75	3.41	4.10
09:20	500	10000	30.9	7.85	6316	57.2	7.17	14	60.75	3.41	4.10

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	09:27	Color	Clear
Sample ID	CW-04D-LF-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	14	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-04M-3V

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	60.89
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.78
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	169.88
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	53.34
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	108.99
		Pump Intake Depth (ft bmp)		Purge Date	06/05/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
09:45	2	8	30.04	7.61	6659	-20.2	7.21	10	61.00	3.61	4.34
09:53	2	24	30.11	7.60	6696	-27.3	7.02	6	61.00	3.63	4.34
10:01	2	40	30.13	7.62	6672	-34.2	6.97	4	61.00	3.63	4.34
10:05	2	48	30.14	7.63	6682	-37.3	6.95	3	61.00	3.63	4.34
10:09	2	56	30.16	7.63	6696	-38.1	6.93	3	61.00	3.63	4.34

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	10:10	Color	Clear
Sample ID	CW-04M-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

CW-04M-LF

Date	06/05/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	60.89
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.78
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	169.88
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	108.99
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	150	Purge Date	06/05/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
09:03	500	2000	30.05	7.63	6686	-16.3	7.25	60	60.95	3.64	4.35
09:11	500	6000	30.17	7.63	6646	-24.6	6.98	25	60.95	3.60	4.30
09:19	500	10000	30.34	7.64	6629	-25.2	6.88	17	60.95	3.59	4.31
09:23	500	12000	30.42	7.64	6633	-25.2	6.72	13	60.95	3.59	4.30
09:27	500	14000	30.45	7.64	6628	-25.6	6.70	12	60.95	3.60	4.30
09:31	500	16000	30.43	7.64	6630	-26.1	6.67	12	60.95	3.60	4.30

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/05/2018	Double Filter Turbidity	--
Sample Time	09:32	Color	Clear
Sample ID	CW-04M-LF-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	12	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

OW-05M-3V

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.52
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	25.564
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	250.25
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	76.692
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	156.730
		Pump Intake Depth (ft bmp)	230	Purge Date	06/06/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:32	2	15	28.9	7.85	6340	71.8	7.99	3	93.55	3.43	4.12
12:38	2	31	28.6	7.81	6340	70.3	7.93	3	93.55	3.43	4.12
12:44	2	46	28.1	7.80	6379	68.7	8.16	3	93.55	3.46	4.14
12:51	2	62	28.6	7.79	6343	67.4	8.12	3	93.55	3.44	4.12
12:58	2	78	28.6	7.80	6349	66.7	7.96	3	93.55	3.44	4.12

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	13:00	Color	Clear
Sample ID	OW-05M-3V-Q218	Odor	none
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	13:30
Without Filter Turbidity	3	EB Sample ID	MW-730-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

OW-05M-LF

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.50
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	25.567
Location	Topock, CA	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	250.25
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	156.750
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	230	Purge Date	06/06/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
11:44	500	2000	29.9	7.73	6396	74.8	8.09	60	93.52	3.46	4.15
11:48	500	4000	29.9	7.74	6399	72.2	7.77	21	93.52	3.46	4.15
11:52	500	6000	30.0	7.75	6395	70.5	8.24	14	93.52	3.46	4.16
11:56	500	8000	30.1	7.74	6400	69.4	8.01	8	93.52	3.46	4.15
12:00	500	10000	30.2	7.74	6403	68.1	7.89	9	93.52	3.46	4.16
12:04	500	12000	30.1	7.74	6396	67.3	7.95	8	93.52	3.46	4.16

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	12:08	Color	Clear
Sample ID	OW-05M-LF-Q218	Odor	none
Duplicate Sample ID	MW-903-Q218	MS/MSD Sample Time	--
Dup Sample Time	12:18	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	8	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Item	Yes	No	NA	Notes
Photo Taken?	X			
Action Completed?		X		

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

OW-05S-3V

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	94.26
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	3.08
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	113.13
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	9.24
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	18.87
		Pump Intake Depth (ft bmp)		Purge Date	06/06/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:20	0.5	2	30.77	7.46	5224	-59.1	4.30	3	94.45	2.77	3.38
12:24	0.5	4	31.01	7.45	5195	-62.8	4.10	3	94.45	2.78	3.37
12:28	0.5	6	31.17	7.45	5143	-61.2	3.91	3	94.45	2.74	3.35
12:32	0.5	8	31.21	7.45	5138	-60.4	3.90	3	94.45	2.73	3.34
12:36	0.5	10	31.09	7.46	5106	-59.3	3.86	3	94.45	2.72	3.32

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	12:37	Color	Clear
Sample ID	OW-05S-3V-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	12:50
Without Filter Turbidity	3	EB Sample ID	MW-729-Q218

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?		X		
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



Groundwater Monitoring Field Data Form
Site: PGE Topock

OW-05S-LF

Date	06/06/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	94.26
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	3.08
Location	Topock, CA	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	113.13
Purge Method	Low Flow	Casing Material	PVC	Total Volume to Remove	
Purge Volume Units	ml	Casing Diameter (in)	2	Water Column in Well	18.87
Sampling Type	Low Flow – Grundfos RF2	Pump Intake Depth (ft bmp)	105	Purge Date	06/06/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
11:43	500	2000	30.23	7.40	5737	-73.6	3.77	116	94.4	3.08	3.73
11:47	500	4000	31.10	7.40	5682	-72.9	3.81	54	94.4	3.04	3.70
11:51	500	6000	30.97	7.41	5656	-69.2	3.84	17	94.4	3.01	3.66
11:55	500	8000	30.87	7.41	5610	-65.2	4.08	10	94.4	2.99	3.64
11:59	500	10000	31.04	7.42	5546	-64.6	3.86	5	94.4	2.95	3.58
12:03	500	12000	30.97	7.42	5434	-63.6	3.84	6	94.4	2.90	3.53
12:07	500	14000	30.95	7.42	5506	-63.2	3.90	5	94.4	2.93	3.54

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	06/06/2018	Double Filter Turbidity	--
Sample Time	12:08	Color	Clear
Sample ID	OW-05S-LF-Q218	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



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Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-05M-LF

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	94.11
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	25.92
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	253.01
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	158.9
		Pump Intake Depth (ft bmp)	230	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
10:26	500	2000	27.0	7.74	7836	60.7	7.28	356	94.50	4.31	5.09
10:30	500	4000	27.4	7.52	7739	63.6	6.92	27	94.50	4.26	5.02
10:34	500	6000	27.4	7.36	7705	64.5	5.23	12	94.50	4.23	4.99
10:38	500	8000	27.6	7.34	7683	64.0	4.84	6	94.50	4.22	4.98
10:42	500	10000	27.8	7.33	7698	63.5	4.76	6	94.50	4.23	5.00
10:46	500	12000	27.8	7.37	7726	63.5	4.92	5	94.50	4.24	5.01

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	10:47	Color	Clear
Sample ID	OW-05M-LF-Q418	Odor	None
Duplicate Sample ID	MW-902-Q418	MS/MSD Sample Time	--
Dup Sample Time	10:52	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-05M-3V

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	94.41
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	25.88
Purge Method	3 Volume	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	253.09
Purge Volume Units	gal	Casing Material		Total Volume to Remove	77.64
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	158.68
		Pump Intake Depth (ft bmp)	120	Purge Date	12/04/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
11:08	3	24	29.2	7.59	7993	59.0	7.83	7	94.77	4.33	5.02
11:16	3	48	29.3	7.60	7855	59.0	7.89	5	94.80	4.32	5.10
11:24	3	64	29.4	7.62	7846	59.0	7.99	5	94.80	4.32	5.10
11:28	3	76	29.4	7.62	7856	59.3	8.05	4	94.80	4.31	5.10
11:32	3	84	29.4	7.63	7837	59.7	8.02	4	94.80	4.32	5.09

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	11:33	Color	Clear
Sample ID	OW-05M-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

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Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-05S-LF

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	95.30
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	2.86
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	112.85
Purge Volume Units	ml	Casing Material		Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	17.55
		Pump Intake Depth (ft bmp)	107	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:12	500	2000	27.0	7.49	5857	53.7	6.03	114	95.35	3.16	3.80
12:16	500	4000	27.9	7.47	5856	53.9	5.97	42	95.35	3.16	3.80
12:20	500	6000	28.5	7.46	5756	54.7	5.87	27	95.35	3.10	3.75
12:24	500	8000	28.5	7.46	5726	56.5	5.96	19	95.35	3.08	3.71
12:28	500	10000	28.7	7.45	5693	56.1	5.90	18	95.35	3.03	3.66
12:32	500	12000	28.7	7.45	5692	55.8	5.88	18	95.35	3.05	3.68

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	1
Sample Time	12:33	Color	Clear
Sample ID	OW-05S-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	18	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



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Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-05S-3V

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	95.30
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	2.86
Purge Method	3 Volume	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	112.85
Purge Volume Units	gal	Casing Material		Total Volume to Remove	
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	17.55
		Pump Intake Depth (ft bmp)	107	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
12:48	.25	1	27.6	7.50	5493	55.2	6.29	6	95.4	2.94	3.54
12:52	.25	2	28.4	7.47	5521	58.7	5.99	5	95.4	2.96	3.58
12:56	.25	3	28.3	7.46	5512	58.5	5.69	5	95.4	2.96	3.56
13:00	.25	4	28.6	7.47	5414	58.9	5.60	4	95.4	2.90	3.52
13:04	.25	5	28.6	7.46	5430	59.0	5.56	4	95.40	2.91	3.52

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	13:05	Color	Clear
Sample ID	OW-05S-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-01D-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	109.51
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	31.07
Purge Volume Units	gal	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	300
Sampling Type	Volume Purge – Grundfos RF2	Casing Material	PVC	Total Volume to Remove	93.21
		Casing Diameter (in)	2	Water Column in Well	190.49
		Pump Intake Depth (ft bmp)	275	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:45	2	20	26.2	7.74	7737	86.1	4.84	4	109.70	4.25	5.02
13:55	2	40	26.2	7.74	7726	84.9	5.00	3	109.70	4.24	5.01
14:05	2	60	26.3	7.75	7727	81.7	4.92	3	109.70	4.24	5.02
14:15	2	80	26.2	7.72	7726	79.1	4.95	3	109.70	4.26	5.01
14:23	2	96	26.1	7.72	7723	77.3	4.97	3	109.70	4.24	5.01

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	14:24	Color	Clear
Sample ID	CW-01D-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-01D-LF

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	109.51
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	31.07
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	300
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	190.49
		Pump Intake Depth (ft bmp)	275	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:18	500	2000	25.2	7.57	7543	79.4	4.25	18	109.55	4.20	4.95
13:22	500	4000	25.7	7.74	7657	79.0	4.20	12	109.55	4.23	4.97
13:26	500	6000	26.1	7.74	7683	84.3	4.25	6	109.55	4.24	4.98
13:30	500	8000	26.2	7.75	7668	85.3	4.24	5	109.55	4.24	4.98
13:34	500	10000	26.3	7.75	7672	85.9	4.22	5	109.55	4.24	4.98

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	13:35	Color	Clear
Sample ID	CW-01D-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-01M-LF

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	109.44
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	13.26
Purge Method	Low Flow	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	190.73
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	81.29
		Pump Intake Depth (ft bmp)	165	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:24	500	2000	29.3	7.76	7647	170.4	4.77	11	109.55	4.16	4.99
13:28	500	4000	29.8	7.76	7665	166.1	4.82	10	109.55	4.18	4.97
13:32	500	6000	29.8	7.78	7675	164.4	4.90	10	109.55	4.21	5.00
13:36	500	8000	30.2	7.78	7739	160.4	5.01	10	109.55	4.24	5.03
13:40	500	10000	30.3	7.78	7751	158.7	5.12	10	109.55	4.26	5.05

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	13:41	Color	Clear
Sample ID	CW-01M-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	10	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-01M-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	109.55
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	13.24
Purge Volume Units	gal	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	190.73
Sampling Type	Volume Purge – Grundfos RF2	Casing Material	PVC	Total Volume to Remove	39.72
		Casing Diameter (in)	2	Water Column in Well	81.18
		Pump Intake Depth (ft bmp)	165	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:56	1.5	9	28.8	7.77	7757	152.0	5.21	11	109.70	4.28	5.01
14:02	1.5	18	28.7	7.77	7722	152.1	5.37	10	109.70	4.27	5.07
14:08	1	27	28.8	7.76	7782	152.1	5.44	9	109.70	4.29	5.05
14:14	1.5	36	28.8	7.77	7772	152.0	5.52	10	109.70	4.25	5.06
14:17	1.5	40	28.8	7.77	7780	151.8	5.57	9	109.70	4.28	5.05

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	14:18	Color	Clear
Sample ID	CW-01M-3V-Q418	Odor	None
Duplicate Sample ID	MW-900-4Q18	MS/MSD Sample Time	--
Dup Sample Time	14:23	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	9	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?			X	
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-02D-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	92.54
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.55
Purge Method	3 Volume	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	335.00
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	118.65
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	242.46
		Pump Intake Depth (ft bmp)	320	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:46	3	15	27.4	7.70	8151	102.7	3.03	2	92.58	4.50	5.27
13:51	3	30	27.6	7.71	8150	102.5	3.00	2	92.58	4.52	5.30
13:56	3	45	27.7	7.71	8150	102.4	3.00	2	92.58	4.52	5.29
14:01	3	60	27.7	7.71	8150	102.2	3.00	2	92.58	4.52	5.30
14:06	3	75	27.7	7.71	8149	102.5	3.01	2	92.58	4.52	5.31
14:11	3	90	27.7	7.71	8147	102.3	3.01	2	92.58	4.53	5.31
14:16	3	105	27.7	7.70	8147	102.4	3.01	2	92.58	4.53	5.31
14:21	3	120	27.7	7.70	8145	102.5	3.00	2	92.58	4.53	5.32

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	14:25	Color	Clear
Sample ID	CW-02D-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-02M-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.08
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.54
Purge Method	3 Volume	Sampler	Nara Tep	Measured Well Depth (ft bmp)	200.62
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	52.62
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	107.54
		Pump Intake Depth (ft bmp)	177	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:39	2	8	29.7	7.61	8047	85.1	1.93	1	94.99	4.42	5.23
13:43	2	16	29.7	7.65	8049	87.6	1.96	1	95.01	4.42	5.23
13:47	2	24	29.7	7.65	8049	88.0	1.98	1	95.01	4.42	5.23
13:51	2	32	29.8	7.68	8049	89.1	1.98	1	95.01	4.42	5.23
13:55	2	40	29.8	7.68	8050	89.0	1.95	1	95.01	4.42	5.23
13:59	2	48	29.8	7.68	8050	89.6	1.94	1	95.01	4.42	5.23
14:03	2	56	29.8	7.68	8050	89.9	1.94	1	95.01	4.42	5.23

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	14:04	Color	Clear
Sample ID	CW-02M-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	1	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-02M-LF

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.08
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.54
Purge Method	Low Flow	Sampler	Nara Tep	Measured Well Depth (ft bmp)	200.62
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Peristaltic Pump	Casing Diameter (in)	2	Water Column in Well	107.54
		Pump Intake Depth (ft bmp)	177	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:05	500	1500	29.0	7.28	8027	81.2	1.79	26	93.15	4.42	5.20
13:08	500	3000	29.1	7.42	8018	83.7	1.78	12	93.15	4.42	5.21
13:11	500	4500	29.1	7.56	8018	83.9	1.75	7	93.15	4.42	5.21
13:14	500	6000	29.1	7.69	8018	85.0	1.74	6	93.15	4.42	5.21
13:17	500	7500	29.1	7.71	8019	85.6	1.74	5	93.15	4.42	5.21
13:20	500	9000	29.1	7.72	8019	86.1	1.73	5	93.15	4.42	5.21

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	13:21	Color	Clear
Sample ID	CW-02M-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-03D-LF

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	77.28
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.59
Purge Method	Low Flow	Sampler	Nara Tep	Measured Well Depth (ft bmp)	320.00
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	242.72
		Pump Intake Depth (ft bmp)	295	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
14:38	500	3000	28.4	7.88	8043	83.6	1.82	2	77.35	4.43	5.22
14:41	500	4500	28.6	7.89	8043	85.6	1.86	2	77.35	4.43	5.22
14:44	500	6000	28.6	7.89	8045	86.0	1.87	1	77.35	4.43	5.22
14:47	500	7500	28.6	7.89	8045	86.9	1.88	1	77.35	4.43	5.22
14:50	500	9000	28.6	7.89	8045	87.6	1.88	1	77.35	4.43	5.22
14:53	500	10500	28.6	7.89	8045	87.9	1.88	1	77.35	4.43	5.22
14:56	500	12000	28.6	7.89	8046	88.0	1.89	1	77.35	4.43	5.22
14:59	500	13500	28.6	7.89	8046	89.0	1.89	1	77.35	4.43	5.22

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:00	Color	Clear
Sample ID	CW-03D-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	1	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-03D-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	77.28
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.59
Purge Method	3 Volume	Sampler	Nara Tep	Measured Well Depth (ft bmp)	320.00
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	118.77
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	242.72
		Pump Intake Depth (ft bmp)	295	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
15:19	3	30	28.6	7.93	8055	86.8	2.12	2	78.11	4.44	5.23
15:29	3	60	28.5	7.93	8061	87.3	2.15	1	78.11	4.44	5.23
15:39	3	90	28.5	7.93	8062	87.9	2.16	1	78.11	4.44	5.23
15:44	3	105	28.5	7.93	8062	88.0	2.16	1	78.11	4.44	5.23
15:49	3	120	28.5	7.93	8062	88.1	2.16	1	78.11	4.44	5.23

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:50	Color	Clear
Sample ID	CW-03D-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	16:10
Without Filter Turbidity	1	EB Sample ID	MW-702-Q418

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?			X	
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-03M-3V

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	77.95
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	23.5
Purge Method	3 Volume	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	222.00
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	70.5
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	144.05
		Pump Intake Depth (ft bmp)	197	Purge Date	12/03/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
15:15	3	15	29.4	7.67	8716	80.4	3.23	10	78.00	4.85	5.68
15:20	3	30	29.4	7.67	8715	80.3	3.25	10	78.00	4.85	5.70
15:25	3	45	29.5	7.67	8715	80.5	3.25	10	78.00	4.85	5.69
15:30	3	60	29.4	7.67	8715	80.3	3.25	10	78.00	4.84	5.70
15:35	3	75	29.5	7.67	8716	80.5	3.25	10	78.00	4.84	5.69

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:40	Color	Clear
Sample ID	CW-03M-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	15:45
Without Filter Turbidity	10	EB Sample ID	Mw-701-q418

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-04D-3V

Date	12/04/2018	Weather Conditions	Cloudy	Depth to Water (ft bmp)	61.72
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	36.09
Purge Method	3 Volume	Sampler	Nara Tep	Measured Well Depth (ft bmp)	283.00
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	108.27
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	221.28
		Pump Intake Depth (ft bmp)	258	Purge Date	12/04/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:54	3	30	28.6	7.49	8048	93.0	3.16	3	62.86	4.43	93.1
09:04	3	60	28.7	7.52	8047	94.3	3.79	2	62.90	4.43	94.9
09:09	3	75	29.0	7.63	8063	95.2	3.09	2	62.90	4.44	95.1
09:14	3	90	29.0	7.63	8065	95.9	3.02	2	62.90	4.44	95.1
09:19	3	105	29.0	7.63	8065	96.1	3.01	2	62.90	4.44	95.1
09:24	3	120	29.0	7.63	8065	96.9	3.01	2	62.90	4.44	95.6

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	09:25	Color	Clear
Sample ID	CW-04D-3V-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-04D-LF

Date	12/04/2018	Weather Conditions	Cloudy	Depth to Water (ft bmp)	61.72
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	36.09
Purge Method	Low Flow	Sampler	Nara Tep	Measured Well Depth (ft bmp)	283.00
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	221.28
		Pump Intake Depth (ft bmp)	258	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:12	500	3000	28.5	7.24	8048	98.4	3.73	11	61.83	4.44	5.23
08:18	500	6000	28.5	7.39	8051	96.6	3.70	7	61.83	4.44	5.23
08:21	500	7500	28.6	7.56	8051	96.6	3.65	5	61.83	4.44	5.23
08:24	500	9000	28.6	7.60	8051	94.6	3.62	4	61.83	4.44	5.23
08:27	500	10500	28.7	7.62	8053	94.1	3.61	4	61.83	4.44	5.23
08:30	500	12000	28.7	7.61	8053	94.0	3.59	4	61.83	4.44	5.23

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	08:31	Color	Clear
Sample ID	CW-04D-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-04M-3V

Date	12/04/2018	Weather Conditions	Cloudy	Depth to Water (ft bmp)	61.91
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.55
Purge Method	3 Volume	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	169.5
Purge Volume Units	gal	Casing Material	PVC	Total Volume to Remove	52.65
Sampling Type	Volume Purge – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	107.59
		Pump Intake Depth (ft bmp)	144.5	Purge Date	12/04/2018
		Casing Volume to Remove	3		

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:53	2	10	28.1	7.55	8058	74.9	3.61	4	61.98	4.44	5.23
08:58	2	20	28.1	7.55	8056	74.5	3.62	4	61.98	4.45	5.22
09:03	2	30	28.1	7.55	8057	74.6	3.62	3	61.98	4.44	5.22
09:08	2	40	28.1	7.55	8056	74.5	3.62	3	61.98	4.44	5.22
09:13	2	50	28.1	7.55	8057	74.6	3.62	3	61.98	4.45	5.23
09:15	2	54	28.1	7.55	8056	74.5	3.62	3	61.98	4.45	5.23

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	09:20	Color	Clear
Sample ID	CW-04M-3V-Q418	Odor	None
Duplicate Sample ID	MW-901-Q418	MS/MSD Sample Time	--
Dup Sample Time	09:30	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	3	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?		X		
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-02D-LF

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	92.54
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	39.55
Purge Method	Low Flow	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	335.00
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	242.46
		Pump Intake Depth (ft bmp)	320	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:07	500	1500	28.1	7.08	8183	115.2	3.20	4	92.58	4.52	5.31
13:10	500	3000	28.0	7.30	8180	115.5	3.18	4	92.58	4.50	5.28
13:13	500	4500	28.0	7.30	8182	115.3	3.20	5	92.58	4.51	5.27
13:16	500	6000	28.0	7.31	8179	114.9	3.18	5	92.58	4.50	5.28
13:19	500	7500	28.0	7.31	8178	114.8	3.20	5	92.58	4.49	5.26
13:23	500	9000	28.0	7.32	8178	114.3	3.18	5	92.58	4.51	5.27
13:26	500	10500	28.0	7.31	8179	114.3	3.19	5	92.58	4.51	5.27

Sampling Summary

Did Well Dewater?	--	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	13:29	Color	Grey
Sample ID	CW-02D-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-03M-LF

Date	12/03/2018	Weather Conditions		Depth to Water (ft bmp)	77.95
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	23.5
Purge Volume Units	ml	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	222.00
Sampling Type	Low Flow – Grundfos RF2	Casing Material	PVC	Total Volume to Remove	
		Casing Diameter (in)	2	Water Column in Well	144.05
		Pump Intake Depth (ft bmp)	197	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
14:40	500	1500	27.1	7.71	8951	84.0	3.19	12	77.95	5.01	5.85
14:43	500	3000	27.4	7.69	8956	81.9	3.21	9	77.97	4.99	5.83
14:46	500	4500	27.6	7.69	8960	82.3	3.22	9	77.97	4.98	5.82
14:49	500	6000	27.7	7.69	8961	82.5	3.22	9	77.97	4.98	5.82
14:52	500	7500	27.8	7.68	8962	82.6	3.21	9	77.97	4.97	5.82
14:55	500	9000	27.8	7.69	8963	82.3	3.21	9	77.97	4.96	5.83
14:58	500	10500	27.8	7.68	8963	82.5	3.21	9	77.97	4.97	5.82

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:00	Color	Clear
Sample ID	CW-03M-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	9	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

CW-04M-LF

Date	12/04/2018	Weather Conditions		Depth to Water (ft bmp)	61.91
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	17.55
Purge Volume Units	ml	Sampler	Kevin Thompson	Measured Well Depth (ft bmp)	169.5
Sampling Type	Low Flow – Grundfos RF2	Casing Material	PVC	Total Volume to Remove	
		Casing Diameter (in)	2	Water Column in Well	107.59
		Pump Intake Depth (ft bmp)	144.5	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:03	500	1500	27.7	7.70	8053	87.3	3.37	10	61.96	4.44	5.23
08:06	500	3000	27.7	7.68	8049	84.9	3.40	10	61.96	4.45	5.23
08:09	500	4500	27.7	7.67	8048	81.3	3.41	10	61.96	4.44	5.23
08:12	500	6000	27.7	7.67	8049	80.9	3.41	10	61.96	4.44	5.23
08:15	500	7500	27.7	7.67	8047	80.5	3.41	10	61.69	4.43	5.22
08:18	500	9000	27.7	7.67	8046	80.3	3.41	10	61.69	4.43	5.22
08:21	500	10500	27.7	7.67	8046	80.2	3.41	10	61.69	4.43	5.23

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	08:30	Color	Clear
Sample ID	CW-04M-LF-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	10	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?			X	
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-01D

Date	12/04/2018	Weather Conditions	Cloudy	Depth to Water (ft bmp)	93.20
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	30.78
Purge Method	Low Flow	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	281.89
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	188.69
Comments	Data for OW-01D	Pump Intake Depth (ft bmp)	267	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:24	500	2000	24.3	7.78	7575	172.8	5.00	9	93.25	4.18	4.92
08:28	500	4000	22.4	7.85	7621	170.3	5.09	8	93.25	4.23	4.97
08:32	500	6000	22.2	7.89	7660	168.2	5.24	7	93.25	4.23	4.97
08:36	500	8000	22.6	7.90	7724	167.7	5.32	6	93.25	4.26	5.04
08:40	500	10000	22.5	7.90	7732	167.0	5.37	6	93.25	4.26	5.05

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	08:41	Color	Clear
Sample ID	OW-01D-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	6	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Item	Yes	No	NA	Notes
Remarks				

Photos and Drawings

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-01M

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.81
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	15.6
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	189.45
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	95.64
		Pump Intake Depth (ft bmp)	175	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
15:11	500	2000	27.6	7.52	7597	80.0	6.37	78	93.90	4.22	4.97
15:15	500	4000	27.8	7.52	7673	80.0	6.46	14	93.90	4.24	5.01
15:19	500	6000	27.8	7.51	7657	79.7	6.89	5	93.90	4.23	4.99
15:23	500	8000	27.8	7.50	7620	79.5	6.97	4	93.90	4.20	4.96
15:27	500	10000	27.7	7.59	7643	78.9	6.99	4	93.90	4.17	4.9

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:28	Color	Clear
Sample ID	OW-01M-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-01S

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	93.97
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	3.22
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	113.70
Purge Volume Units	ml	Casing Material		Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	19.73
		Pump Intake Depth (ft bmp)	103	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
15:52	500	2000	27.5	6.85	7399	80.3	6.53	24	94.05	4.06	4.81
15:56	500	4000	28.5	6.85	7371	82.5	5.96	9	94.05	4.03	4.77
16:00	500	6000	28.8	6.85	7222	83.8	5.89	5	94.05	3.94	4.68
16:04	500	8000	28.8	6.86	7111	84.7	5.94	4	94.05	3.88	4.6
16:08	500	10000	28.8	6.86	7067	84.7	5.99	4	94.05	3.86	4.58

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	16:09	Color	Clear
Sample ID	OW-01S-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	2	EB Time	16:20
Without Filter Turbidity	4	EB Sample ID	MW-703-Q418

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-02D

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.86
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	38.84
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	330
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	238.14
		Pump Intake Depth (ft bmp)	320	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
08:43	500	2000	24.1	7.74	7633	82.2	6.13	14	91.90	4.22	4.95
08:47	500	4000	23.6	7.74	7672	74.8	7.02	10	91.80	4.25	4.99
08:51	500	6000	23.4	7.75	7701	73.8	7.11	6	91.90	4.24	4.99
08:55	500	8000	23.9	7.76	7777	70.9	7.08	5	91.90	4.30	5.05
08:59	500	10000	23.2	7.76	7787	67.6	7.14	5	91.90	4.31	5.05
09:03	500	12000	23.3	7.76	7782	67.2	7.16	5	91.90	4.31	5.05

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	09:04	Color	Clear
Sample ID	OW-02D-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	4	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-02M

Date	12/03/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	91.90
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	19.26
Purge Method	Low Flow	Sampler	Matt Trainotti	Measured Well Depth (ft bmp)	210.0
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	118.1
		Pump Intake Depth (ft bmp)	200	Purge Date	12/03/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
15:14	500	2000	23.6	7.86	7710	137.2	7.15	27	91.97	4.22	4.99
15:18	500	4000	22.4	7.85	7704	144.3	6.99	12	91.97	4.25	4.97
15:22	500	6000	22.0	7.83	7744	147.3	6.82	10	91.97	4.25	5.03
15:26	500	8000	21.8	7.83	7704	149.0	6.71	9	91.97	4.28	5.02
15:30	500	10000	21.7	7.83	7700	150.1	6.66	9	91.97	4.29	5.02

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/03/2018	Double Filter Turbidity	--
Sample Time	15:31	Color	Clear
Sample ID	OW-02M-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	15:50
Without Filter Turbidity	9	EB Sample ID	MW-704-Q418

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-02S

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	92.69
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	1.56
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	102.27
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	9.58
		Pump Intake Depth (ft bmp)	97	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
09:38	500	2000	28.4	7.87	3462	58.9	7.73	14	92.75	1.80	2.23
09:42	500	4000	28.6	7.88	3391	59.9	7.78	8	92.75	1.77	2.21
09:46	500	6000	28.7	7.88	3405	60.2	7.80	6	92.75	1.78	2.22
09:50	500	8000	28.7	7.88	3449	60.6	7.82	5	92.75	1.80	2.24
09:54	500	10000	28.7	7.89	3447	60.8	7.84	5	92.75	1.80	2.24

Sampling Summary

Did Well Dewater?	NA	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	09:55	Color	Clear
Sample ID	OW-02S-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	5	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		
Well Casing Intact?	X			
Photo Taken?	X			

ARCADIS Design & Consultancy for natural and built assets

Groundwater Monitoring Field Data Form

Site: PGE Topock

Topock, CA

OW-05D

Date	12/04/2018	Weather Conditions	Sunny	Depth to Water (ft bmp)	94.73
Project_Number	RC000753.0801	Water Quality Meter	YSI	Gallons in Well	36.74
Purge Method	Low Flow	Sampler	Jason Mahn	Measured Well Depth (ft bmp)	320
Purge Volume Units	ml	Casing Material	PVC	Total Volume to Remove	
Sampling Type	Low Flow – Grundfos RF2	Casing Diameter (in)	2	Water Column in Well	225.27
		Pump Intake Depth (ft bmp)	310	Purge Date	12/04/2018
		Casing Volume to Remove			

Field Parameters

Time	Flow Rate (ml/min or gal/min)	Cuml Vol Purged	Temp (C)	pH	Conductivity (uS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	DTW (ft)	Salinity (ppt)	TDS (g/L)
13:24	500	2000	25.4	7.39	7457	-108.9	.95	2	94.75	4.10	4.82
13:28	500	4000	25.4	7.42	7457	-54.4	.90	2	94.75	4.21	5.00
13:32	500	6000	24.4	7.37	7661	-18.5	.82	2	94.75	4.18	4.91
13:36	500	8000	26.9	7.30	7612	22.3	.80	2	94.75	4.16	4.92
13:40	500	10000	27.2	7.56	7763	37.4	.83	2	94.75	4.19	4.92
13:44	500	12000	27.5	7.62	7787	42.8	.83	2	94.752	4.20	4.93
13:48	500	14000	27.4	7.65	7790	45.8	.84	2	94.75	4.21	4.93

Sampling Summary

Did Well Dewater?	No	Post Sampling Turbidity	--
Sample Date	12/04/2018	Double Filter Turbidity	--
Sample Time	13:49	Color	Clear
Sample ID	OW-05D-Q418	Odor	None
Duplicate Sample ID	--	MS/MSD Sample Time	--
Dup Sample Time	--	MS/MSD Sample ID	--
Single Filter Turbidity	1	EB Time	--
Without Filter Turbidity	2	EB Sample ID	--

Well Integrity Checklist

Item	Yes	No	NA	Notes
Date				
Time				
Survey Mark Present?	X			
Standing or Ponded Water?		X		
Lock in Place?	X			
Evidence of well subsidence?		X		
Well Labeled on Casing or Pad?	X			
Traffic Poles Intact?	X			
Concrete Pad Intact?	X			
Erosion Around Wellhead?		X		
Steel Casing Intact?	X			
PVC Cap Present?	X			
Standing Water in Annulus?		X		

Groundwater Monitoring Field Data Form
Site: PGE Topock
Topock, CA

Item	Yes	No	NA	Notes
Well Casing Intact?	X			
Photo Taken?	X			

Photos and Drawings



APPENDIX C

ARAR Monitoring Information for Groundwater Samples, 2018

Appendix C
ARAR Monitoring Information for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-01M	CW-01M-3V-Q218	Jason Mahn	6/4/2018	14:26	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	85	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	1.1	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	77	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	170	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/7/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/5/2018	RAB	µg/L	0.4	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	1.7	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	35	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	2.2	0.50	0.032
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	15	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	18	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	0.91	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	16	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,700	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	1.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/5/2018	LR	µS/cm	7,000	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	3.3	0.50	0.36
					ASSET	EPA 300.0	SO4	6/7/2018	RAB	mg/L	470	25	1.1
					ASSET	SM 2540 C	TDS	6/5/2018	LR	mg/L	4,000	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/5/2018	LR	NTU	0.33	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	2.4	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

Appendix C
ARAR Monitoring Information for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-01M	CW-01M-3V-Q418	Matt Trainotti	12/3/2018	14:18	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	89	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	1.2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	87	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1.2 J	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (2.5)	2.5	0.21
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	160	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	1.4	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	1.5	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	14	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	1 J	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	17	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,900	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	3.8	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	4,000	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.14	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	2.5	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

Appendix C
ARAR Monitoring Information for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-01M	MW-900-Q418	Matt Trainotti	12/3/2018	14:23	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	91	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	1.2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	84	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1.2 J	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (2.5)	2.5	0.21
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	150	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	1.3	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	1.3	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.1	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	13	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	16	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	2.3 J	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	16	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.9	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,900	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	3.9	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.15	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	2.3	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

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Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-01D	CW-01D-3V-Q218	Jason Mahn	6/4/2018	14:35	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	66	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	1.1	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	23	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (2.5)	2.5	0.21
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	160	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/7/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/5/2018	RAB	µg/L	ND (0.2)	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1 J)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	77 J	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	2.4	0.50	0.032
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	13	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	17	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	0.74	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	20	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	0.75	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	3	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (5)	5.0	0.64
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/5/2018	LR	µS/cm	7,100	0.10	0.10
					ASSET	EPA 200.8	SED	6/18/2018	CEI	µg/L	3.8	0.50	0.36
					ASSET	EPA 300.0	SO4	6/7/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	6/5/2018	LR	mg/L	4,200	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (2.5)	2.5	0.96
					ASSET	SM 2130 B	TRB	6/5/2018	LR	NTU	0.46	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	2.4	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

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CW-01D	CW-01D-3V-Q418	Jason Mahn	12/3/2018	14:24	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	76	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	1.2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	24	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	150	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	0.29	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.2	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	18	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	20	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.5	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	8,000	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	4	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,900	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.16	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	2.3	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

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CW-02M	CW-02M-3V-Q218	Jason Mahn	6/6/2018	09:12	ASSET	EPA 200.8	AGD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/8/2018	LR	mg/L	58	5.0	1.2
					ASSET	EPA 200.8	ASD	6/18/2018	CEI	µg/L	1.8	0.10	0.081
					ASSET	EPA 200.8	BAD	6/18/2018	CEI	µg/L	68	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	140	0.5	0.085
					ASSET	EPA 200.8	CDD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/8/2018	RAB	µg/L	0.87	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/18/2018	CEI	µg/L	1.2	1.0	0.13
					ASSET	EPA 200.8	CUD	6/21/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/8/2018	CEI	µg/L	110	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	36	20	18
					ASSET	EPA 300.0	FL	6/8/2018	RAB	mg/L	3	0.50	0.032
					ASSET	EPA 245.1	HGD	6/7/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/20/2018	CEI	mg/L	13	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	9.3	0.1	0.048
					ASSET	EPA 200.8	MND	6/18/2018	CEI	µg/L	1.4	0.50	0.26
					ASSET	EPA 200.8	MOD	6/18/2018	CEI	µg/L	15	0.50	0.21
					ASSET	EPA 200.7	NAD	6/20/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/21/2018	CEI	µg/L	1.6	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/16/2018	QBM	mg/L	2.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/18/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/7/2018	LR	µS/cm	7,200	0.10	0.10
					ASSET	EPA 200.8	SED	6/18/2018	CEI	µg/L	3.6	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	6/7/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/7/2018	LR	NTU	0.79	0.10	0.10
					ASSET	EPA 200.8	VD	6/18/2018	CEI	µg/L	3.6	1.0	0.28
					ASSET	EPA 200.8	ZND	6/18/2018	CEI	µg/L	ND (10)	10	2.3

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CW-02M	CW-02M-3V-Q418	Nara Tep	12/3/2018	14:04	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	60	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	67	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	130	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	0.96	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	1.3	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.8	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	12	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	9.7	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	1.6	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	15	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,800	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	3.7	0.5	0.36
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,900	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.41	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	3.6	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

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CW-02D	CW-02D-3V-Q218	Jason Mahn	6/6/2018	09:40	ASSET	EPA 200.8	AGD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/8/2018	LR	mg/L	64	5.0	1.2
					ASSET	EPA 200.8	ASD	6/18/2018	CEI	µg/L	3	0.10	0.081
					ASSET	EPA 200.8	BAD	6/18/2018	CEI	µg/L	15	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	100	0.5	0.085
					ASSET	EPA 200.8	CDD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/8/2018	RAB	µg/L	ND (0.2)	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/18/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/21/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/8/2018	CEI	µg/L	ND (20 J)	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/8/2018	RAB	mg/L	1.7	0.10	0.0065
					ASSET	EPA 245.1	HGD	6/7/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/20/2018	CEI	mg/L	13	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	5 J	0.1	0.048
					ASSET	EPA 200.8	MND	6/18/2018	CEI	µg/L	1.8	0.50	0.26
					ASSET	EPA 200.8	MOD	6/18/2018	CEI	µg/L	12	0.50	0.21
					ASSET	EPA 200.7	NAD	6/20/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/21/2018	CEI	µg/L	6.9	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/16/2018	QBM	mg/L	2.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/18/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/7/2018	LR	µS/cm	7,200	0.10	0.10
					ASSET	EPA 200.8	SED	6/18/2018	CEI	µg/L	4	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	6/7/2018	LR	mg/L	4,200	50	50
					ASSET	EPA 200.8	TLD	6/18/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/7/2018	LR	NTU	0.47	0.10	0.10
					ASSET	EPA 200.8	VD	6/18/2018	CEI	µg/L	4.1	1.0	0.28
					ASSET	EPA 200.8	ZND	6/18/2018	CEI	µg/L	12	10	2.3

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CW-02D	CW-02D-3V-Q418	Kevin Thompson	12/3/2018	14:25	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	61	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	2.8	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	16	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1.1 J	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	110	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	ND (0.2)	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1 J)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	1.8	0.2	0.013
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	13	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	6	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	2.1	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	12	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	2,300	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.9	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,900	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	3.8	0.5	0.36
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,900	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.47	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	3.9	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10 J)	10	2.3

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Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-03M	CW-03M-3V-Q218	Jason Mahn	6/5/2018	14:18	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	52	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	1.2	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	42	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.3	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	190	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,300	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/7/2018	RAB	µg/L	3.8	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	3.9	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	110	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	32	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	3.3	0.50	0.032
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	16	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	13	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	1.1	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	27	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,900	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	2.5	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (5)	5.0	0.64
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/6/2018	LR	µS/cm	7,600	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	2.4	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	6/6/2018	LR	mg/L	4,400	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (2.5)	2.5	0.96
					ASSET	SM 2130 B	TRB	6/6/2018	LR	NTU	2.4	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	2.7	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

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CW-03M	CW-03M-3V-Q418	Kevin Thompson	12/3/2018	15:40	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	52	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	1.3	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	41	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (2.5)	2.5	0.21
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	170	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,300	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	3.9	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	4.8	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/5/2018	CEI	µg/L	740	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	3.5	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	18	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	11	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	2.2	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	30	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	1.2	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.3	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	8,600	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	2.7	0.5	0.36
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	510	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 5310 C	TOC	12/4/2018	QBM	mg/L	ND (10 J)	10	0.36
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	19	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	2.7	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

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CW-03D	CW-03D-3V-Q218	Jason Mahn	6/5/2018	14:30	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	64	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	1.4	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	16	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	75	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,000	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/7/2018	RAB	µg/L	ND (0.2 J)	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	2.5	0.20	0.013
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	12	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	4.7	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	1.8	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	15	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,800	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	3	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (5)	5.0	0.64
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/6/2018	LR	µS/cm	7,200	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	3.2	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	470	25	1.1
					ASSET	SM 2540 C	TDS	6/6/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (2.5)	2.5	0.96
					ASSET	SM 2130 B	TRB	6/6/2018	LR	NTU	0.36	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	2.5	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

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CW-03D	MW-902-Q218	Jason Mahn	6/5/2018	14:40	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	64	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	1.5	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	17	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	78	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/7/2018	RAB	µg/L	1.1 J	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	39	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	2.3	0.20	0.013
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	14 J	2.5	0.43
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	4.9	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	1.8	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	16	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,800	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	2.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (5)	5.0	0.64
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/6/2018	LR	µS/cm	7,200	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	3.5	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	470	25	1.1
					ASSET	SM 2540 C	TDS	6/6/2018	LR	mg/L	3,800	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (2.5)	2.5	0.96
					ASSET	SM 2130 B	TRB	6/6/2018	LR	NTU	0.28	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	2.7	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

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CW-03D	CW-03D-3V-Q418	Nara Tep	12/3/2018	15:50	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	62	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	1.5	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	15	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (2.5)	2.5	0.21
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	67	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	ND (0.2)	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	1.1	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.3	0.2	0.013
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	11	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	4.9	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	2.6	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	14	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.7	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	8,000	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	3.9	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	4,000	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 5310 C	TOC	12/4/2018	QBM	mg/L	ND (10 J)	10	0.36
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	0.79	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	2.4	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3

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Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
CW-04M	CW-04M-3V-Q218	Jason Mahn	6/5/2018	10:10	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	54	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	2.2	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	110	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	0.97	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	200	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/7/2018	RAB	µg/L	1.2	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	1.5	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	53	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/8/2018	RAB	mg/L	2	0.50	0.032
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	15	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	14	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	2.4	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	10	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	2.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/6/2018	LR	µS/cm	6,900	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	3.3	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	6/6/2018	LR	mg/L	3,900	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/6/2018	LR	NTU	0.64	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	3.5	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10)	10	2.3

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CW-04M	CW-04M-3V-Q418	Jason Mahn	12/4/2018	09:20	ASSET	EPA 200.8	AGD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/6/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	55	5	1.2
					ASSET	EPA 200.8	ASD	12/5/2018	CEI	µg/L	2.1	0.1	0.081
					ASSET	EPA 200.8	BAD	12/5/2018	CEI	µg/L	110	1	0.15
					ASSET	EPA 200.7	BD	12/6/2018	CEI	mg/L	0.98	0.1	0.074
					ASSET	EPA 200.8	BED	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/6/2018	CEI	mg/L	190	0.5	0.085
					ASSET	EPA 200.8	CDD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,000	250	4.6
					ASSET	EPA 200.8	COBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	1.3	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	2	1	0.13
					ASSET	EPA 200.8	CUD	12/5/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/6/2018	CEI	µg/L	32	20	18
					ASSET	EPA 200.7	FETD	12/6/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2	0.5	0.032
					ASSET	EPA 245.1	HGD	12/5/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/6/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	12/6/2018	CEI	mg/L	15	0.1	0.048
					ASSET	EPA 200.8	MND	12/5/2018	CEI	µg/L	0.84	0.5	0.26
					ASSET	EPA 200.8	MOD	12/6/2018	CEI	µg/L	11	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,400	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/11/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/5/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.7	1	0.29
					ASSET	EPA 200.8	PBD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,200	0.1	0.1
					ASSET	EPA 200.8	SED	12/5/2018	CEI	µg/L	3.9	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,200	50	50
					ASSET	EPA 200.8	TLD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	0.66 J	0.1	0.1
					ASSET	EPA 200.8	VD	12/5/2018	CEI	µg/L	3	1	0.28
					ASSET	EPA 200.8	ZND	12/5/2018	CEI	µg/L	ND (10)	10	2.3

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CW-04M	MW-901-Q418	Jason Mahn	12/4/2018	09:30	ASSET	EPA 200.8	AGD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/6/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	55	5	1.2
					ASSET	EPA 200.8	ASD	12/5/2018	CEI	µg/L	2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/5/2018	CEI	µg/L	100	1	0.15
					ASSET	EPA 200.7	BD	12/6/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/6/2018	CEI	mg/L	200	0.5	0.085
					ASSET	EPA 200.8	CDD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,000	250	4.6
					ASSET	EPA 200.8	COBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	1.3	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	1.9	1	0.13
					ASSET	EPA 200.8	CUD	12/5/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/6/2018	CEI	µg/L	33	20	18
					ASSET	EPA 200.7	FETD	12/6/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2	0.5	0.032
					ASSET	EPA 245.1	HGD	12/5/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/6/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	12/6/2018	CEI	mg/L	15	0.1	0.048
					ASSET	EPA 200.8	MND	12/5/2018	CEI	µg/L	0.86	0.5	0.26
					ASSET	EPA 200.8	MOD	12/6/2018	CEI	µg/L	10	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,400	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/11/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/5/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,200	0.1	0.1
					ASSET	EPA 200.8	SED	12/5/2018	CEI	µg/L	3.7	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	0.86 J	0.1	0.1
					ASSET	EPA 200.8	VD	12/5/2018	CEI	µg/L	2.7	1	0.28
					ASSET	EPA 200.8	ZND	12/5/2018	CEI	µg/L	ND (10)	10	2.3

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CW-04D	CW-04D-3V-Q218	Jason Mahn	6/5/2018	10:40	ASSET	EPA 200.8	AGD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/7/2018	LR	mg/L	59	5.0	1.2
					ASSET	EPA 200.8	ASD	6/7/2018	CEI	µg/L	2.8	0.10	0.081
					ASSET	EPA 200.8	BAD	6/7/2018	CEI	µg/L	19	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	140	0.5	0.085
					ASSET	EPA 200.8	CDD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/7/2018	RAB	µg/L	ND (0.2)	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/7/2018	CEI	µg/L	ND (1 J)	1.0	0.55
					ASSET	EPA 6010B	FE	6/7/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/7/2018	RAB	mg/L	2.8	0.20	0.013
					ASSET	EPA 245.1	HGD	6/6/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/18/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	8.6	0.1	0.048
					ASSET	EPA 200.8	MND	6/7/2018	CEI	µg/L	1.2	0.50	0.26
					ASSET	EPA 200.8	MOD	6/7/2018	CEI	µg/L	19	0.50	0.21
					ASSET	EPA 200.7	NAD	6/18/2018	CEI	mg/L	1,700	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/7/2018	CEI	µg/L	ND (1)	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/14/2018	QBM	mg/L	2.7	0.25	0.16
					ASSET	EPA 200.8	PBD	6/7/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/6/2018	LR	µS/cm	7,000	0.10	0.10
					ASSET	EPA 200.8	SED	6/7/2018	CEI	µg/L	3.7	0.50	0.36
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	470	25	1.1
					ASSET	SM 2540 C	TDS	6/6/2018	LR	mg/L	4,000	50	50
					ASSET	EPA 200.8	TLD	6/7/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/6/2018	LR	NTU	0.39	0.10	0.10
					ASSET	EPA 200.8	VD	6/7/2018	CEI	µg/L	3.2	1.0	0.28
					ASSET	EPA 200.8	ZND	6/7/2018	CEI	µg/L	ND (10 J)	10	2.3

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CW-04D	CW-04D-3V-Q418	Jason Mahn	12/4/2018	09:25	ASSET	EPA 200.8	AGD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/6/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	59	5	1.2
					ASSET	EPA 200.8	ASD	12/5/2018	CEI	µg/L	3	0.1	0.081
					ASSET	EPA 200.8	BAD	12/5/2018	CEI	µg/L	19	1	0.15
					ASSET	EPA 200.7	BD	12/6/2018	CEI	mg/L	1.2 J	0.1	0.074
					ASSET	EPA 200.8	BED	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/6/2018	CEI	mg/L	150	0.5	0.085
					ASSET	EPA 200.8	CDD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	0.31	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	CUD	12/5/2018	CEI	µg/L	ND (1 J)	1	0.55
					ASSET	EPA 6010B	FE	12/6/2018	CEI	µg/L	32	20	18
					ASSET	EPA 200.7	FETD	12/6/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2.8	0.2	0.013
					ASSET	EPA 245.1	HGD	12/5/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/6/2018	CEI	mg/L	14	0.5	0.085
					ASSET	EPA 200.7	MGD	12/6/2018	CEI	mg/L	9.1	0.1	0.048
					ASSET	EPA 200.8	MND	12/5/2018	CEI	µg/L	1.7	0.5	0.26
					ASSET	EPA 200.8	MOD	12/6/2018	CEI	µg/L	20	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,600	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/11/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/5/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,400	0.1	0.1
					ASSET	EPA 200.8	SED	12/5/2018	CEI	µg/L	4	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,200	50	50
					ASSET	EPA 200.8	TLD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	0.6	0.1	0.1
					ASSET	EPA 200.8	VD	12/5/2018	CEI	µg/L	2.7	1	0.28
					ASSET	EPA 200.8	ZND	12/5/2018	CEI	µg/L	ND (10 J)	10	2.3

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OW-01S	OW-01S-Q418	Jason Mahn	12/3/2018	16:09	ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	1,900	250	4.6
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	4.1	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	4.6	1	0.13
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	0.94	0.5	0.032
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	4	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	980	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,100	0.1	0.1
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	430	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,900	50	50
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	3.7	0.1	0.1
OW-01M	OW-01M-Q418	Jason Mahn	12/3/2018	15:28	ASSET	EPA 200.8	AGD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/4/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/5/2018	LR	mg/L	83	5	1.2
					ASSET	EPA 200.8	ASD	12/4/2018	CEI	µg/L	2.3	0.1	0.081
					ASSET	EPA 200.8	BAD	12/4/2018	CEI	µg/L	70	1	0.15
					ASSET	EPA 200.7	BD	12/4/2018	CEI	mg/L	1	0.1	0.074
					ASSET	EPA 200.8	BED	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/4/2018	CEI	mg/L	140	0.5	0.085
					ASSET	EPA 200.8	CDD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	0.78	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	1.2	1	0.13
					ASSET	EPA 200.8	CUD	12/4/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/4/2018	CEI	µg/L	85	20	18
					ASSET	EPA 200.7	FETD	12/4/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.3	0.5	0.032
					ASSET	EPA 245.1	HGD	12/4/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/5/2018	CEI	mg/L	15	0.5	0.085
					ASSET	EPA 200.7	MGD	12/4/2018	CEI	mg/L	26	0.1	0.048
					ASSET	EPA 200.8	MND	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.26
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	23	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/6/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/4/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/4/2018	CEI	µg/L	ND (1)	1	0.13

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OW-01M	OW-01M-Q418	Jason Mahn	12/3/2018	15:28	ASSET	EPA 200.8	SBD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,900	0.1	0.1
					ASSET	EPA 200.8	SED	12/4/2018	CEI	µg/L	4.1	0.5	0.36
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,800	50	50
					ASSET	EPA 200.8	TLD	12/4/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	3.3	0.1	0.1
					ASSET	EPA 200.8	VD	12/4/2018	CEI	µg/L	3.1	1	0.28
					ASSET	EPA 200.8	ZND	12/4/2018	CEI	µg/L	ND (10)	10	2.3
OW-01D	OW-01D-Q418	Jason Mahn	12/4/2018	08:41	ASSET	EPA 200.8	AGD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/6/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/6/2018	LR	mg/L	76	5	1.2
					ASSET	EPA 200.8	ASD	12/5/2018	CEI	µg/L	1.2	0.1	0.081
					ASSET	EPA 200.8	BAD	12/5/2018	CEI	µg/L	30	1	0.15
					ASSET	EPA 200.7	BD	12/6/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/6/2018	CEI	mg/L	160	0.5	0.085
					ASSET	EPA 200.8	CDD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	0.54	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	CUD	12/5/2018	CEI	µg/L	ND (1)	1	0.55
					ASSET	EPA 6010B	FE	12/6/2018	CEI	µg/L	460	20	18
					ASSET	EPA 200.7	FETD	12/6/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2.2	0.5	0.032
					ASSET	EPA 245.1	HGD	12/5/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/6/2018	CEI	mg/L	16	0.5	0.085
					ASSET	EPA 200.7	MGD	12/6/2018	CEI	mg/L	24	0.1	0.048
					ASSET	EPA 200.8	MND	12/5/2018	CEI	µg/L	1	0.5	0.26
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	21	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/11/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/5/2018	CEI	µg/L	1.4	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.5	1	0.29
					ASSET	EPA 200.8	PBD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,400	0.1	0.1

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OW-01D	OW-01D-Q418	Jason Mahn	12/4/2018	08:41	ASSET	EPA 200.8	SED	12/5/2018	CEI	µg/L	3.8	0.5	0.36
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	11	0.1	0.1
					ASSET	EPA 200.8	VD	12/5/2018	CEI	µg/L	2.2	1	0.28
					ASSET	EPA 200.8	ZND	12/5/2018	CEI	µg/L	ND (10)	10	2.3
OW-02S	OW-02S-Q418	Jason Mahn	12/4/2018	09:55	ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	910	100	1.8
					ASSET	EPA 218.6	CR6	12/6/2018	RAB	µg/L	15	1	0.17
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	17	1	0.13
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	3.1	0.2	0.013
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	27	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	590	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	3	1	0.29
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	3,300	0.1	0.1
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	140	5	0.23
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	1,900	25	25
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	6.4	0.1	0.1
OW-02M	OW-02M-Q418	Jason Mahn	12/3/2018	15:31	ASSET	EPA 300.0	CL	12/4/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 218.6	CR6	12/4/2018	RAB	µg/L	0.96	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/4/2018	CEI	µg/L	2.1	1	0.13
					ASSET	EPA 300.0	FL	12/4/2018	RAB	mg/L	2.1	0.5	0.032
					ASSET	EPA 200.8	MOD	12/4/2018	CEI	µg/L	22	0.5	0.21
					ASSET	EPA 200.7	NAD	12/5/2018	CEI	mg/L	1,500	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/6/2018	1139	mg/L	2.6	1	0.29
					ASSET	EPA 120.1	SC	12/4/2018	LR	µS/cm	7,900	0.1	0.1
					ASSET	EPA 300.0	SO4	12/4/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	12/4/2018	LR	mg/L	3,900	50	50
					ASSET	SM 2130 B	TRB	12/4/2018	LR	NTU	11	0.1	0.1

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OW-02D	OW-02D-Q418	Jason Mahn	12/4/2018	09:04	ASSET	EPA 300.0	CL	12/6/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	ND (0.2)	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	1.1	1	0.13
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2.2	0.5	0.032
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	21	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,500	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.6	1	0.29
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,400	0.1	0.1
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	490	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,200	50	50
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	2.9	0.1	0.1
OW-05S	OW-05S-3V-Q218	Jason Mahn	6/6/2018	12:37	ASSET	EPA 300.0	CL	6/13/2018	RAB	mg/L	1,600	250	4.6
					ASSET	EPA 218.6	CR6	6/8/2018	RAB	µg/L	9.6	0.40	0.066
					ASSET	EPA 200.8	CRTD	6/18/2018	CEI	µg/L	10	1.0	0.13
					ASSET	EPA 300.0	FL	6/8/2018	RAB	mg/L	1.5	0.50	0.032
					ASSET	EPA 200.8	MOD	6/18/2018	CEI	µg/L	11	0.50	0.21
					ASSET	EPA 200.7	NAD	6/20/2018	CEI	mg/L	670 J	50	9.6
					ASSET	SM 4500-NO3 F	NO3NO2N	6/16/2018	QBM	mg/L	3.3	0.25	0.16
					ASSET	EPA 120.1	SC	6/7/2018	LR	µS/cm	4,900	0.10	0.10
					ASSET	EPA 300.0	SO4	6/13/2018	RAB	mg/L	350	25	1.1
					ASSET	SM 2540 C	TDS	6/7/2018	LR	mg/L	3,500	33	33
					ASSET	SM 2130 B	TRB	6/7/2018	LR	NTU	0.78	0.10	0.10
OW-05S	OW-05S-3V-Q418	Jason Mahn	12/4/2018	13:05	ASSET	EPA 300.0	CL	12/5/2018	RAB	mg/L	1,500	250	4.6
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	12	0.4	0.066
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	12	1	0.13
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	1.4	0.5	0.032
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	9.8	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	620	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	3	1	0.29
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	5,000	0.1	0.1
					ASSET	EPA 300.0	SO4	12/5/2018	RAB	mg/L	300	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	3,100	50	50
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	2.3	0.1	0.1

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OW-05M	OW-05M-3V-Q218	Jason Mahn	6/6/2018	13:00	ASSET	EPA 200.8	AGD	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.23
					ASSET	EPA 200.7	ALD	6/18/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	6/8/2018	LR	mg/L	81	5.0	1.2
					ASSET	EPA 200.8	ASD	6/19/2018	CEI	µg/L	0.86	0.10	0.081
					ASSET	EPA 200.8	BAD	6/19/2018	CEI	µg/L	39	1.0	0.15
					ASSET	EPA 200.7	BD	6/17/2018	CEI	mg/L	1.1	0.1	0.074
					ASSET	EPA 200.8	BED	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 200.7	CAD	6/17/2018	CEI	mg/L	150	0.5	0.085
					ASSET	EPA 200.8	CDD	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.053
					ASSET	EPA 300.0	CL	6/14/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.042
					ASSET	EPA 218.6	CR6	6/8/2018	RAB	µg/L	0.6	0.20	0.033
					ASSET	EPA 200.8	CRTD	6/19/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	CUD	6/21/2018	CEI	µg/L	ND (2.4 UB)	1.0	0.55
					ASSET	EPA 6010B	FE	6/8/2018	CEI	µg/L	22	20	18
					ASSET	EPA 200.7	FETD	6/17/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	6/8/2018	RAB	mg/L	2	0.20	0.013
					ASSET	EPA 245.1	HGD	6/7/2018	MG	µg/L	ND (0.2)	0.20	0.13
					ASSET	EPA 200.7	KD	6/20/2018	CEI	mg/L	15	0.5	0.085
					ASSET	EPA 200.7	MGD	6/17/2018	CEI	mg/L	23	0.1	0.048
					ASSET	EPA 200.8	MND	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.26
					ASSET	EPA 200.8	MOD	6/19/2018	CEI	µg/L	19	0.50	0.21
					ASSET	EPA 200.7	NAD	6/20/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	6/13/2018	JMH	mg/L	ND (0.2)	0.2	0.078
					ASSET	EPA 200.8	NID	6/21/2018	CEI	µg/L	6.8	1.0	0.26
					ASSET	SM 4500-NO3 F	NO3NO2N	6/16/2018	QBM	mg/L	2.5	0.25	0.16
					ASSET	EPA 200.8	PBD	6/19/2018	CEI	µg/L	ND (1)	1.0	0.13
					ASSET	EPA 200.8	SBD	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.16
					ASSET	EPA 120.1	SC	6/7/2018	LR	µS/cm	7,000	0.10	0.10
					ASSET	EPA 200.8	SED	6/19/2018	CEI	µg/L	4.1	0.50	0.36
					ASSET	EPA 300.0	SO4	6/14/2018	RAB	mg/L	480	25	1.1
					ASSET	SM 2540 C	TDS	6/11/2018	LR	mg/L	4,100	50	50
					ASSET	EPA 200.8	TLD	6/19/2018	CEI	µg/L	ND (0.5)	0.50	0.19
					ASSET	SM 2130 B	TRB	6/7/2018	LR	NTU	0.31	0.10	0.10
					ASSET	EPA 200.8	VD	6/19/2018	CEI	µg/L	1.8	1.0	0.28
					ASSET	EPA 200.8	ZND	6/19/2018	CEI	µg/L	14	10	2.3

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Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-05M	OW-05M-3V-Q418	Jason Mahn	12/4/2018	11:33	ASSET	EPA 200.8	AGD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.23
					ASSET	EPA 200.7	ALD	12/6/2018	CEI	µg/L	ND (50)	50	40
					ASSET	SM 2320 B	ALKT	12/6/2018	LR	mg/L	77	5	1.2
					ASSET	EPA 200.8	ASD	12/5/2018	CEI	µg/L	0.74	0.1	0.081
					ASSET	EPA 200.8	BAD	12/5/2018	CEI	µg/L	40	1	0.15
					ASSET	EPA 200.7	BD	12/6/2018	CEI	mg/L	1.1 J	0.1	0.074
					ASSET	EPA 200.8	BED	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 200.7	CAD	12/6/2018	CEI	mg/L	160	0.5	0.085
					ASSET	EPA 200.8	CDD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.053
					ASSET	EPA 300.0	CL	12/6/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 200.8	COBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.042
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	0.22	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	CUD	12/5/2018	CEI	µg/L	ND (1 J)	1	0.55
					ASSET	EPA 6010B	FE	12/6/2018	CEI	µg/L	180	20	18
					ASSET	EPA 200.7	FETD	12/6/2018	CEI	µg/L	ND (20)	20	18
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2.2	0.2	0.013
					ASSET	EPA 245.1	HGD	12/5/2018	MG	µg/L	ND (0.2)	0.2	0.13
					ASSET	EPA 200.7	KD	12/6/2018	CEI	mg/L	17	0.5	0.085
					ASSET	EPA 200.7	MGD	12/6/2018	CEI	mg/L	26	0.1	0.048
					ASSET	EPA 200.8	MND	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.26
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	22	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,500	50	9.6
					BCLabs	SM 4500-NH3 G	NH3N	12/11/2018	JMH	mg/L	ND (0.2)	0.2	0.05
					ASSET	EPA 200.8	NID	12/5/2018	CEI	µg/L	ND (1)	1	0.26
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.8	1	0.29
					ASSET	EPA 200.8	PBD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 200.8	SBD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.16
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,400	0.1	0.1
					ASSET	EPA 200.8	SED	12/5/2018	CEI	µg/L	3.9	0.5	0.36
					ASSET	EPA 300.0	SO4	12/6/2018	RAB	mg/L	500	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,200	50	50
					ASSET	EPA 200.8	TLD	12/5/2018	CEI	µg/L	ND (0.5)	0.5	0.19
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	3.8	0.1	0.1
					ASSET	EPA 200.8	VD	12/5/2018	CEI	µg/L	ND (1)	1	0.28
					ASSET	EPA 200.8	ZND	12/5/2018	CEI	µg/L	ND (10 J)	10	2.3

Appendix C
ARAR Monitoring Information for Groundwater Samples, 2018
Compliance Monitoring Program 2018 Annual Groundwater Monitoring Report and Performance Assessment Report
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Location ID	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-05D	OW-05D-Q418	Jason Mahn	12/4/2018	13:49	ASSET	EPA 300.0	CL	12/6/2018	RAB	mg/L	2,100	250	4.6
					ASSET	EPA 218.6	CR6	12/5/2018	RAB	µg/L	ND (0.2)	0.2	0.033
					ASSET	EPA 200.8	CRTD	12/5/2018	CEI	µg/L	ND (1)	1	0.13
					ASSET	EPA 300.0	FL	12/5/2018	RAB	mg/L	2.3	0.2	0.013
					ASSET	EPA 200.8	MOD	12/7/2018	CEI	µg/L	22	0.5	0.21
					ASSET	EPA 200.7	NAD	12/6/2018	CEI	mg/L	1,500	50	9.6
					EUROFINS	SM 4500-NO3 F	NO3NO2N	12/7/2018	1139	mg/L	2.4	1	0.29
					ASSET	EPA 120.1	SC	12/5/2018	LR	µS/cm	7,400	0.1	0.1
					ASSET	EPA 300.0	SO4	12/6/2018	RAB	mg/L	500	25	1.1
					ASSET	SM 2540 C	TDS	12/5/2018	LR	mg/L	4,200	50	50
					ASSET	SM 2130 B	TRB	12/5/2018	LR	NTU	0.36	0.1	0.1

Acronyms and Abbreviations:

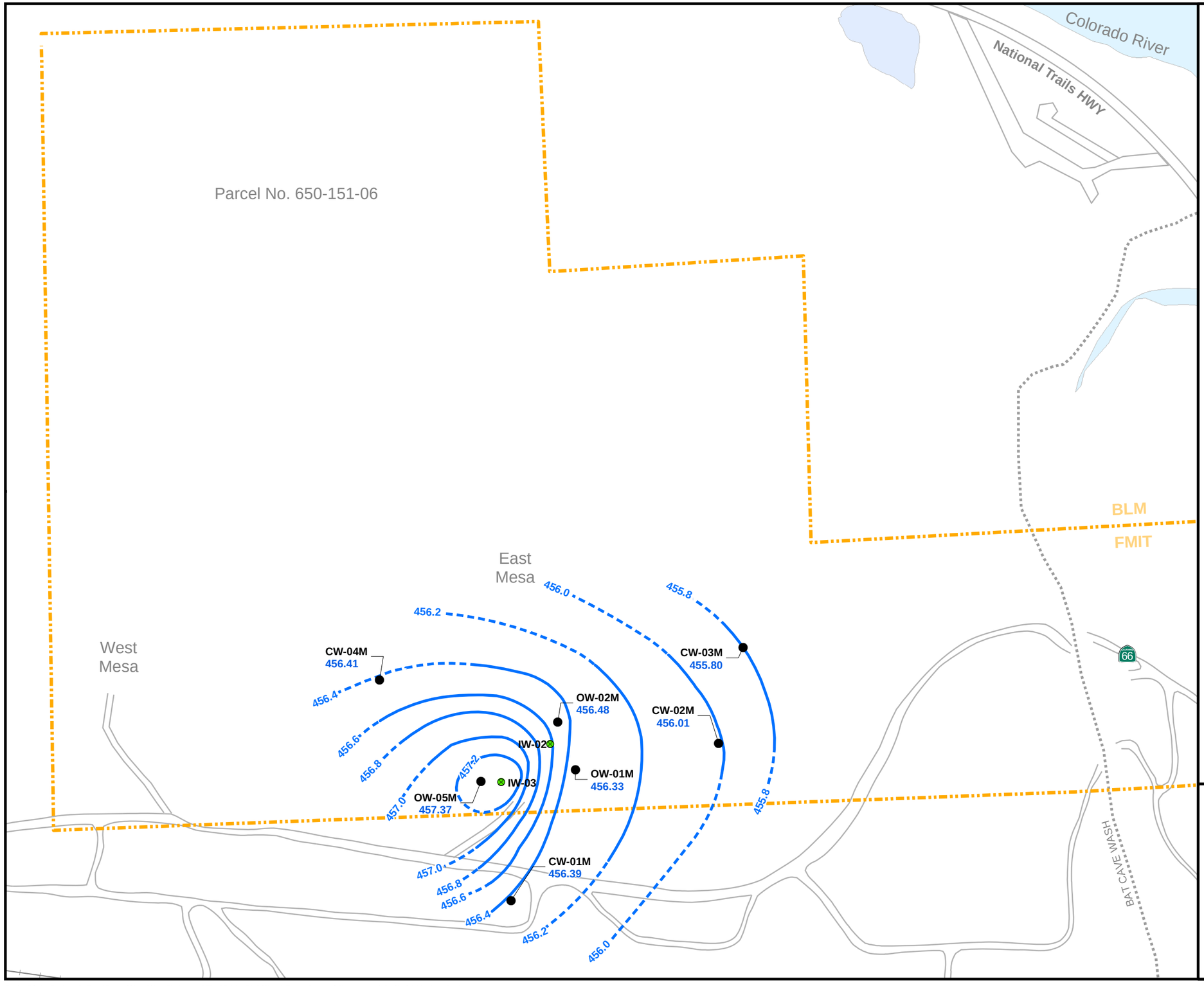
µg/L = micrograms per liter
µS/cm = microSiemens per centimeter
ARAR = applicable or relevant and appropriate requirement
J = concentration or reporting limit estimated by laboratory or data validation
MDL = method detection limit corrected for sample dilution
mg/L = milligrams per liter
ND = parameter not detected at the listed reporting limit
NTU = Nephelometric Turbidity Unit
RL = reporting limit corrected for sample dilution
UB = analyte considered non-detect at the listed value due to associated blank contamination

ASSET = Asset Laboratories
BCLabs = BC Laboratories, Inc.
EUROFINS = Eurofins Calscience

ALKT	alkalinity, total as $CaCO_3$	COBD	cobalt, dissolved	MND	manganese, dissolved	SO4	sulfate
ALD	aluminum, dissolved	CRTD	chromium, dissolved	MOD	molybdenum, dissolved	TLD	thallium, dissolved
AGD	silver, dissolved	CR6	hexavalent chromium	NAD	sodium, dissolved	TDS	total dissolved solids
ASD	arsenic, dissolved	CUD	copper, dissolved	NID	nickel, dissolved	TRB	turbidity
BAD	barium, dissolved	FE	iron	NH3N	ammonia (as nitrogen)	VD	vanadium, dissolved
BD	boron, dissolved	FETD	iron, dissolved	NO3NO2N	nitrate/nitrite (as nitrogen)	ZND	zinc, dissolved
BED	beryllium, dissolved	FL	fluoride	PBD	lead, dissolved		
CAD	calcium, dissolved	HGD	mercury, dissolved	SBD	antimony, dissolved		
CDD	cadmium, dissolved	KD	potassium, dissolved	SC	specific conductance		
CL	chloride	MGD	magnesium, dissolved	SED	selenium, dissolved		

APPENDIX D

Historical Groundwater Elevation Contour Maps



LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well
- Property Line

Groundwater Elevations for Mid-Depth Wells in IM-3 Injection Area

- **OW-05M** 457.37 — Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL).
- Groudwater elevation contour in feet above MSL (0.2 foot interval). Dashed where inferred.

Notes:
BLM = Bureau of Land Management
FMIT = Fort Mojave Indian Tribe

Data posted and contoured from December 6, 2016 manual water level snapshot.

N

0 250 500 Feet

1 inch = 250 feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 7B
GROUNDWATER ELEVATION CONTOURS FOR MID-DEPTH WELLS, DECEMBER 6, 2016

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

ARCADIS

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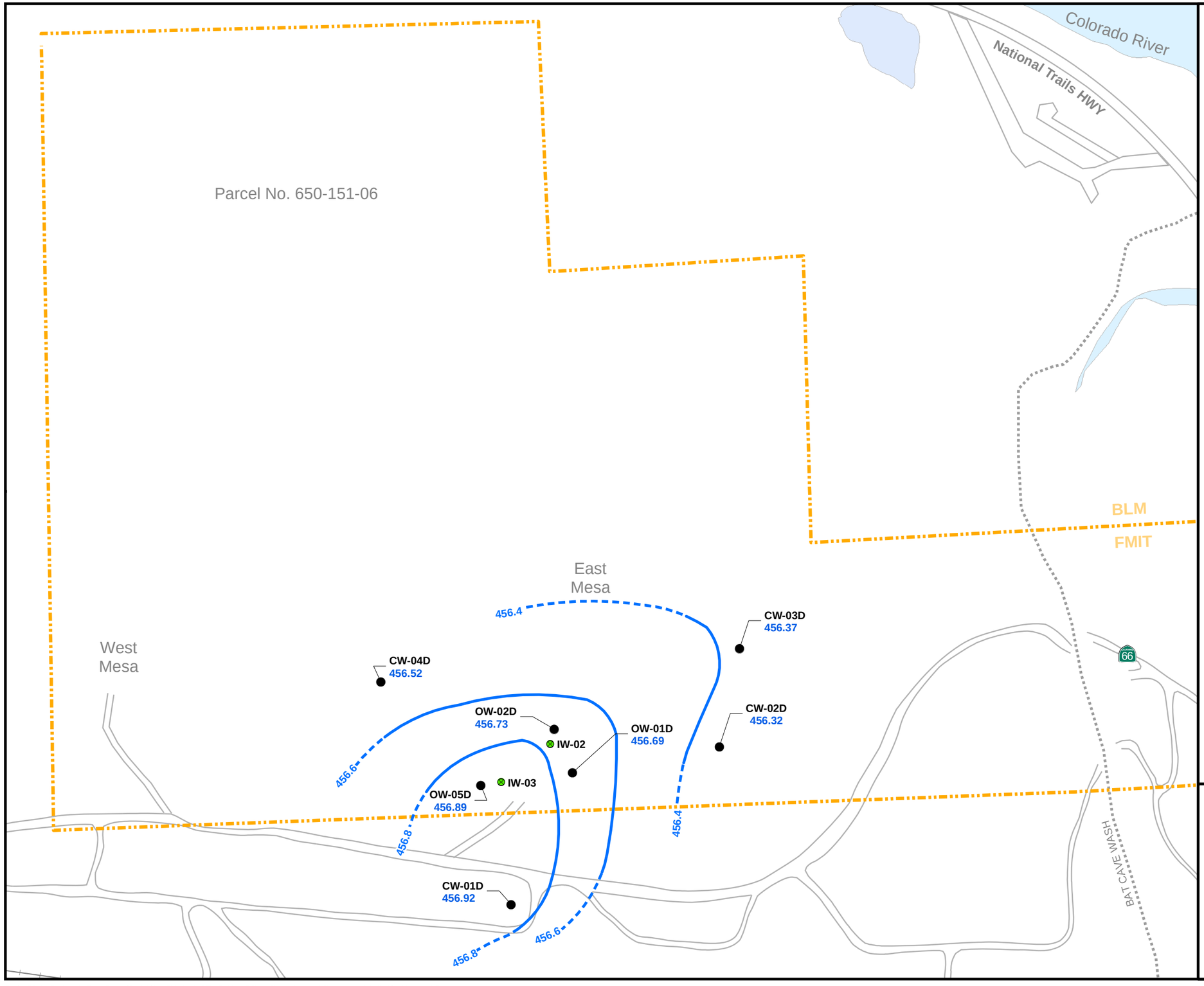

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well
- Property Line

Groundwater Elevations for Deep Wells in IM-3 Injection Area

OW-05D Salinity and temperature adjusted
456.89 groundwater head elevation in feet above mean sea level (MSL).

Groudwater elevation contour in feet above MSL (0.2 foot interval). Dashed where inferred.

Notes:
BLM = Bureau of Land Management
FMIT = Fort Mojave Indian Tribe

Data posted and contoured from December 6, 2016 manual water level snapshot.

N

0 250 500 Feet

1 inch = 250 feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 7C
GROUNDWATER ELEVATION CONTOURS FOR DEEP WELLS, DECEMBER 6, 2016

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

ARCADIS

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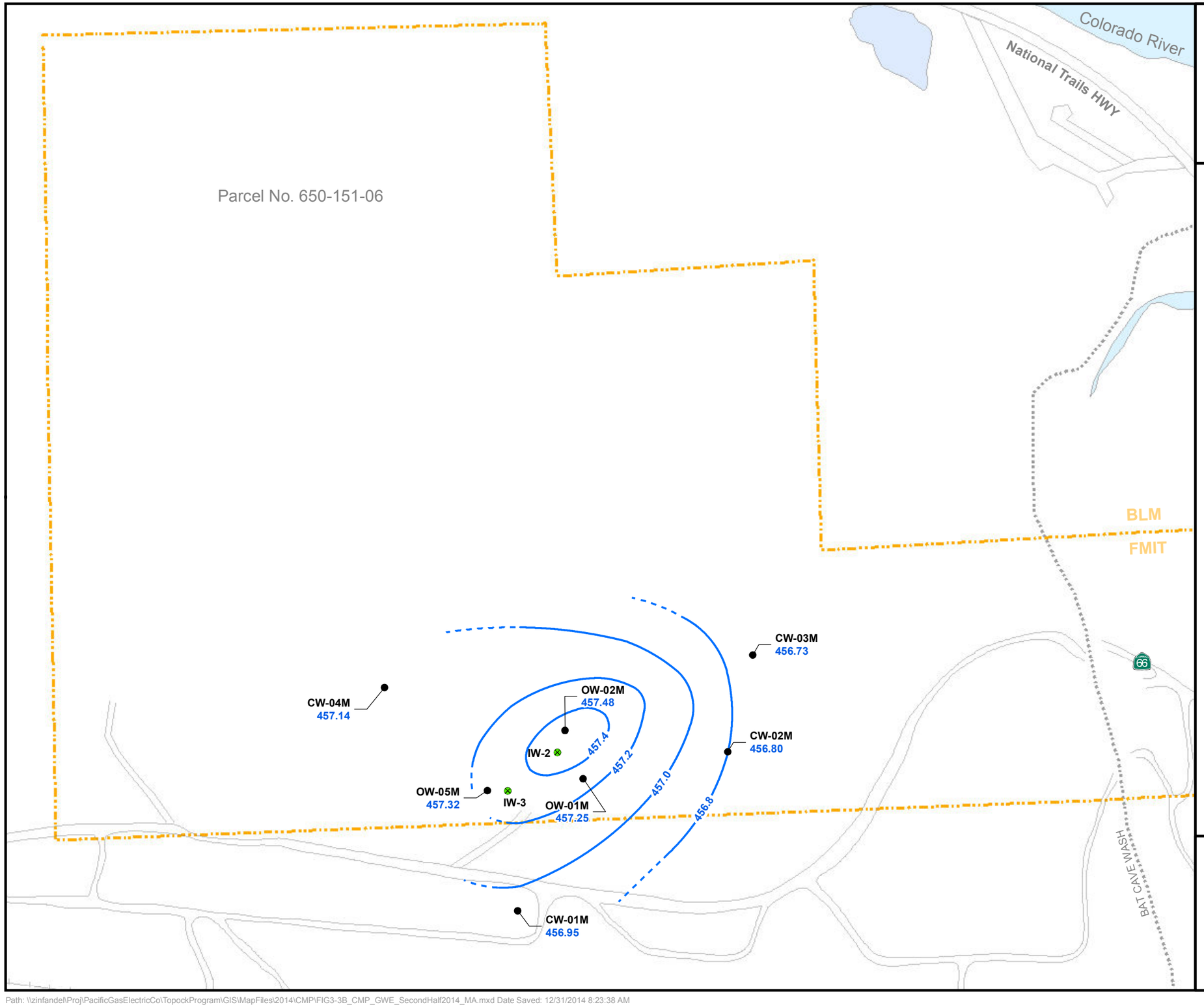

N

0 250 500 Feet

1 inch = 250 feet

California State Plane NAD83 Zone 5 US Feet

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well

Groundwater Elevations for Mid-depth Wells in IM-3 Injection Area

OW-05M 457.39 — Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL).

Groudwater elevation contour in feet above MSL (0.2 foot interval). Dashed where inferred.

Notes:
Average monthly groundwater elevations are calculated with pressure transducer data measured at 30 minute intervals.

FIGURE 3-3B
AVERAGE GROUNDWATER ELEVATION CONTOURS FOR MID-DEPTH WELLS, OCTOBER 21, 2014

COMBINED CMP SEMIANNUAL GROUNDWATER MONITORING REPORT, SECOND HALF 2014, AND PAR, INTERIM MEASURES NO. 3, INJECTION WELL FIELD, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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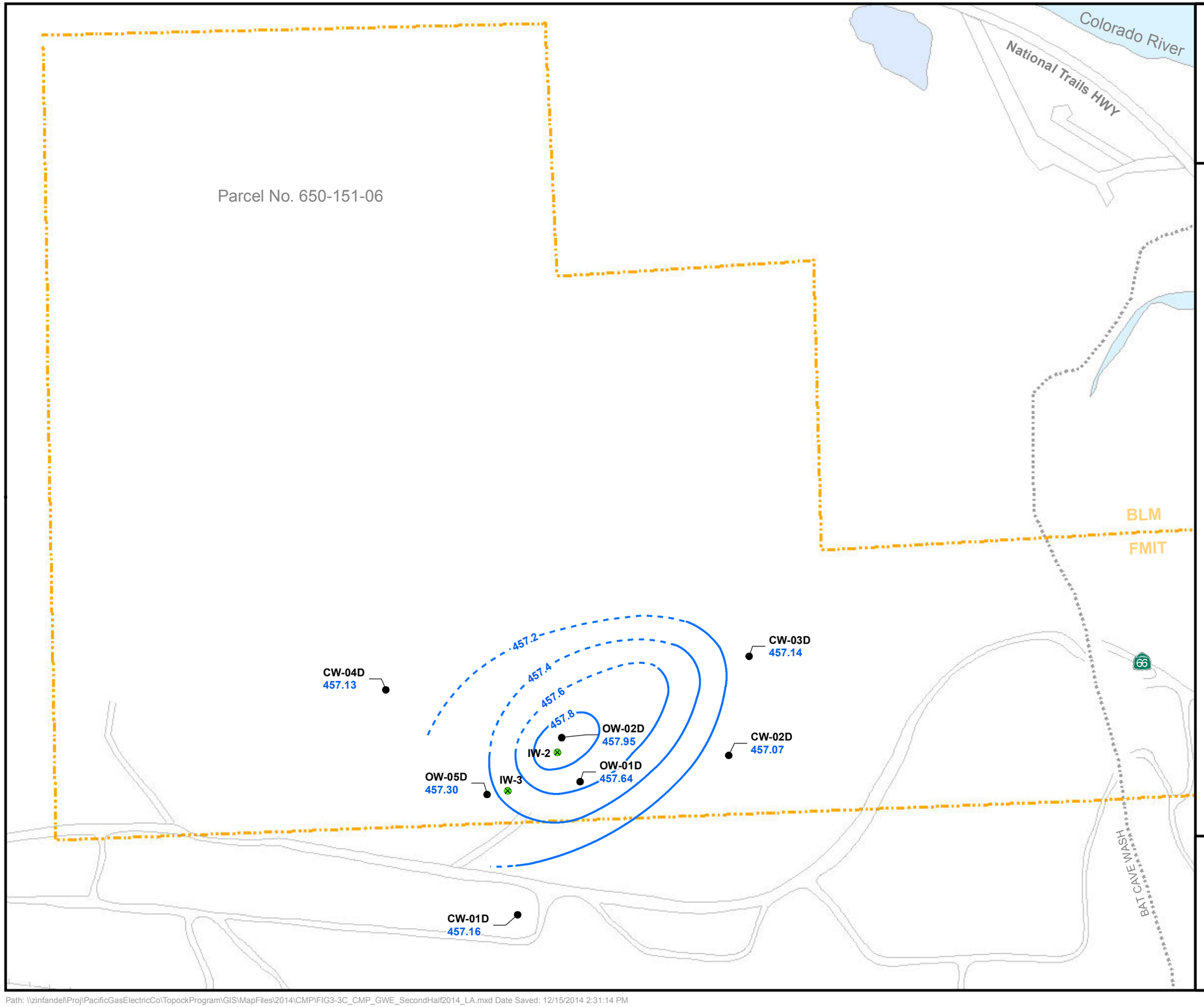

N

0 250 500 Feet

1 inch = 250 feet

California State Plane NAD83 Zone 5 US Feet

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well

Groundwater Elevations for Deep Wells in IM-3 Injection Area

OW-05D 458.38 — Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL).

Groudwater elevation contour in feet above MSL (0.2 foot interval). Dashed where inferred.

Notes:
Average monthly groundwater elevations are calculated with pressure transducer data measured at 30 minute intervals.

FIGURE 3-3C
AVERAGE GROUNDWATER ELEVATION CONTOURS FOR DEEP WELLS, OCTOBER 21, 2014

COMBINED CMP SEMIANNUAL GROUNDWATER MONITORING REPORT, SECOND HALF 2014, AND PAR, INTERIM MEASURES NO. 3, INJECTION WELL FIELD, PG&E TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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